English learning experience with video clips and online quizzes during the confinement

Experiencia de aprendizaje del inglés con video cápsulas y cuestionarios en línea durante el confinamiento social

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Abstract

The following paper covers an intervention conducted in two high schools where educational conditions demand innovation in the teaching of English. Hence, Generation Z characteristics, microlearning, and mobile learning served as the background for a new way of promoting a better learning experience during the coronavirus confinement period[1]. The purpose of this study was to enhance the teaching-learning experience of English in high schoolers by using online quizzes that integrated multimedia materials. Action research was used hand in hand with grounded theory by appealing to qualitative approach techniques for data analysis. Findings revealed that the use of online quizzes with video clips to transmit knowledge fostered a positive experience in foreign language learning as learners were inspired to flexibly interact with digital academic content; also, an attractive-innovative approach and an easily accessible digital learning environment were promoted. Among the main conclusions, it can be highlighted that educational issues are unique in every context and, therefore, educators need to consider their students' and community's traits to find a proper solution to issues that emerge.

Key words: Multimedia instruction, English, audiovisual instruction, education.

Resumen

El siguiente trabajo cubre una intervención conducida en dos planteles de bachillerato donde las condiciones educativas demandan innovación en la enseñanza del inglés. Por lo tanto, las características de la Generación Z, el microaprendizaje, y el aprendizaje móvil sirvieron como la base para una nueva forma de promover una mejor experiencia de aprendizaje durante el confinamiento por coronavirus. El propósito del estudio fue mejorar la experiencia de enseñanza-aprendizaje del inglés en educandos de bachillerato mediante el uso de cuestionarios en línea que integraron materiales multimedia. La investigación-acción se utilizó mano a mano con la teoría fundamentada apelando a técnicas de enfoque cualitativo para el análisis de datos. Los resultados revelaron que el uso de cuestionarios en línea con video cápsulas para transmitir conocimiento fomentó una experiencia positiva en el aprendizaje de la lengua extranjera dado que los estudiantes se inspiraron al interactuar de manera flexible con contenido académico digital; también, se promovió un enfoque atractivo e innovador y un entorno de aprendizaje digital de fácil acceso. Entre las principales conclusiones, se puede destacar que los temas educativos son únicos en cada contexto y, por lo tanto, los educadores deben considerar los rasgos de sus estudiantes y de la comunidad para encontrar una solución adecuada a los problemas que surjan.

Palabras clave: Enseñanza multimedia, inglés, enseñanza audiovisual, educación.

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[1] This document is the result of a research that started during the COVID-19 confinement period under the research line innovation in educational processes through critical, theoretical, and practical reflection. The investigation was self-financed.

Introduction

This investigation took place in two high schools in Culiacán, Sinaloa, México, in an educational scenario that presents difficulties in meeting desired learning outcomes in English language learning. In this vein, it has been identified how teenagers are often diverted by technology, classmates, or personal issues, and as a result, their attention is drawn away from classes carried out in traditional face to face sessions or synchronous formats undertaken in the course of the COVID-19 pandemic. Another problem is that several adolescents have had negative experiences in their educational lives, leaving them with poor study skills, which were evident as they came across different learning complications throughout the social lockdown, such as a short attention span, bad internet connectivity, as well as lack of teacher support and control over their learning process (Olais-Arjona, 2021). Worse yet, the pedagogical strategies that some teachers apply to teach the foreign language in the light of the confinement period caused by the coronavirus still do not reach all learners because of the digital divide (Cervantes-Cerra, 2021). With that in mind, the present researcher thought of implementing online quizzes incorporating videos as a formative strategy with the intention of promoting an innovative education.

Therefore, the object of study for this research can be defined as the use of multimedia materials and web-based quizzes as a strategy to improve the English language learning experience of high school students during the confinement caused by the coronavirus. Concurrently, the investigation's main purpose was to value the high schoolers' experience in learning the foreign language when using online quizzes with video clips during the COVID-19 pandemic. Simultaneously, the following central question was posed: how do online quizzes that include audiovisual material help teenagers have a better experience in the learning of the lingua franca during the social lockdown?

In order to respond to the interrogative, a tentative answer was formulated, which may also be alluded to as a proposition or working hypothesis (Stringer, 2007; Ary, Jacobs, Sorensen & Razavieh, 2010; Cohen, Manion & Morrison, 2018). In this case, web-based quizzes with embedded video clips might favor the learning experience of English for high schoolers since they are inspired to flexibly interact with digital academic content through different kinds of activities.

1.1 Generation Z in a technological education

Nowadays, we are living in an age of technological advancements, all of which have boosted schooling experiences in numerous contexts. Moreover, the use of videos, distance education, as well as

collaborative or cooperative online learning are valuable approaches for ensuring progress at different educational levels (Persada, Miraja & Nadlifatin, 2019). On the other hand, in a world where many generations overlap to meet sociological demands, innovations must be brought about so that they nurture better environments that incorporate digital interaction into learning processes (Kumar-Basak, Wotto & Bélanger, 2018).

The birth of Generation Z, -Gen Z, or centennials ranges around 1995-2012 (Mohr & Mohr, 2017; Schwieger & Ladwig, 2018). Although Gen Z pupils share some traits with Baby Boomers, Generation X, and Millennials, they hold a few distinctions when it comes to handling technological tools. For instance, centennials live with technology, which is easily reflected as they are highly dependent on digital media to build relationships, which means that their social skills could be inferior to those of previous generations (Chicca & Shellenbarger, 2018). Furthermore, Generation Z individuals rely on self-instruction as a powerful resource for their formation process, particularly recurring to online videos on platforms like YouTube (Seemiller & Grace, 2016).

Additionally, Gen Z individuals have ample access to information but might need guidance to prevent information overload, verify accuracy, evaluate, and work out data they come across (Mohr & Mohr, 2017). Another interesting characteristic is that centennials are able to consume, share, but more importantly, generate content on social platforms such as YouTube, Facebook, Twitter, or others in a frequently multitasking dynamic (Nagy & Kölcsey, 2017). Nowadays, centennials can be identified as students in high schools, universities, or teachers at different educational levels (Persada et al., 2019).

1.2 Microlearning and mobile learning alliance

Institutions, teachers, and learners have been absorbed by the technological era in such a way that it is almost impossible to get by without it. For this reason, the formation process has also invaded other spaces of these actors' lives: televisions, computers, or portable devices (Kacetl & Klimova, 2017). Thus, high school teachers ought to be sensible about the fact that technology is a natural part of their pupils (Demir & Sönmez, 2021).

Microlearning is a learning-oriented approach by which information is acquired in small steps. Likewise, it meets features such as being fragmented, short, and available for users at any time or location, essentially online. One crucial facet is that with the rise of technological advancements in mobile learning

(M-learning), microlearning gains significant weight as it gives place to a ubiquitous education employing portable devices (Salinas & Marín, 2014).

On another part, a microlearning approach can be seen in various forms, such as the use of short videos, an aspect that can be very effective in attracting and increasing learning opportunities (Tan & Pearce, 2011). Moreover, it is imperative to consider that Gen Z individuals have a short attention span (Seemiller & Grace, 2017), which could mean that applying microlearning may have a positive effect on these learners.

Furthermore, authors such as Mayer (2001) argue that aural and visual receptive channels incorporate knowledge into our minds when carrying out a learning process utilizing video. In addition, the expert goes on to state that the combination of both channels promotes long-term retention of information (meaningful learning), which is greatly enhanced if such material is compelling for pupils.

M-learning is a preponderant tool to put into action microlearning. One good reason is that it is very useful to activate prior knowledge, summarize a class, and retrieve information hours or weeks after topics have been covered by educators. Another powerful application is that these days, there are many ways to have real-life experiences in digital communities; for instance, an English student might use the learnt language in a Facebook language exchange group or in other social networks (Salinas & Marín, 2014).

1.3 Use of online quizzes and videos in education

For many years, online quizzes have been used as formative assessment or e-assessment. In addition, research has shown that students' attitudes towards quizzes carried out online are often positive because they ameliorate instructional design and encourage effective feedback (Cohen & Sasson, 2016). Such practice has demonstrated that it can be of great support to instruction in blended learning environments, or in situations that are similar to the object of this study.

Furthermore, Cook & Babon (2016) investigated the use of online quizzes on a weekly basis with the intention of enabling and encouraging active learning. In their study, three years of datasets were reviewed in order to understand learners' views towards web-based quizzes. Their findings revealed that pupils showed high levels of engagement since quizzes were discovered to be effective because they fostered active learning when used as preparatory work and were easy to administer by teachers. Moreover, these activities allowed students to feel more prepared for the next class participation, seeing that they would have studied and gone through an assessment preparation procedure.

On the other hand, Salas-Morera, Arauzo-Azofra & García-Hernández (2012) researched the use of online quizzes as a teaching and assessment tool over five consecutive years. The study's goal was to value the efficiency of quizzes on students' overall performance. Such an investigation revealed how web-based quizzes have a positive influence on learning, but it also demonstrated that pupils liked interacting with these instruments as part of their normal activities.

The study undertaken by Salas-Morera et al. (2012) goes in accordance with others. For example, Pinto-Llorente, Sánchez-Gómez, García-Peñalvo & Casillas-Martín (2016) explored learners' perceptions about the effectiveness of utilizing online quizzes to improve their English level by means of efficient feedback in assessment and self-assessment that would, in turn, promote autonomy. This research revealed fundamental findings towards students' perceptions of quizzes since great opportunities to enhance their English were offered through practice and by fostering autonomy as well as motivation.
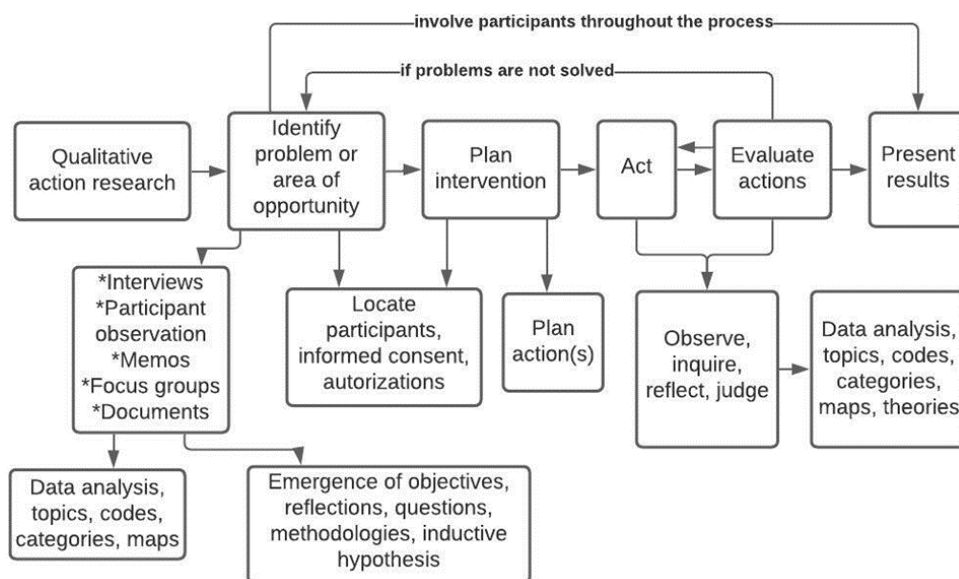
Methodology

The study appealed to a qualitative approach for which the method of action research hand in hand with grounded theory was employed. The rationale is that action research is conducted when a reflective process of inquiry in practice is undertaken through planning and acting to tackle problematic issues in a cycled, systematic, and rigorous way (Stringer, 2007; Ary et al., 2010; Cohen et al., 2018). As this investigation is circumscribed in an educational context, the process was intended to end in an enhancement of the English language learning experience in the light of the coronavirus pandemic. Equally, constructivist grounded theory was used as a supportive methodology not only to analyze data but also theorize during the intervention with inductive and abductive reasoning, also valid in scientific undertakings such as the present (Charmaz, 2006; Norton, 2009).

This method was sought to be applicable based on the premise that a traditional quantitative approach fashioned in a pre-test-post-test design seemed inappropriate, and where a primarily qualitative methodology based on experience, democracy, participation, and critical reflection from both educators and learners as major stakeholders appeared to be more suitable (Stringer, 2007). Therefore, the study solidly leaned more towards qualitative techniques for data collection as the action research favors reasoning and truth in favor of a rational-dialectical view (Carr & Kemmis, 1986).

On the other hand, the action research models developed by Lewin (1948), Stringer (2007), and Norton (2009) were considered to come up with a methodological route that could be adapted to the present investigation circumstances and possibilities (Figure 1).

Figure 1. Representation of the action research process undertaken

Source*:* Author's own elaboration, parting from Lewin (1948), Stringer (2007), and Norton (2009).

2.1 Instruments

Founded in the critical educational science paradigm, action research is a methodology that favors a dialectical position of rationality. What is more, it leans towards the interpretative approach, but with a strong emphasis on change through the critical social science that involves reflection and action (Carr & Kemmis, 1986). In this manner, investigation techniques such as participant observation, documentary analysis, semi-structured interviews, and focus groups were carried out to inquire in the educational practice as they are pertinent in studies of qualitative nature (Ary et al., 2010; Dikilitaş & Griffiths, 2017). Likewise, an online survey was applied not with the intention of measuring variables but to include as many participants as possible, which is also valid in action research processes (Stringer, 2007; Cohen et al., 2018).

Participant observation. Cohen et al. (2018) indicate that observers act as part of the group or participants under observation, which fits perfectly into this study's methodological path where the researcher plays a major role as an English teacher. Specific observation tools can be designed depending on the purpose of the research. In this case, it was viable to recur to an unstructured detailed notetaking form

to record observations (Stringer, 2007; Dikilitaş & Griffiths, 2017) in order to have as a result a summary of the English language teaching praxis during the coronavirus confinement period. Registrations were made without preestablished items or categories, only having in mind the phase of the research. These notes were not necessarily documented every day, some were recorded on a weekly or biweekly basis (annex 1).

Documents. Experts point out that a great deal of information may be discovered in documents or records from the research field (Stringer, 2007; Kemmis, McTaggart, & Nixon, 2014; Cohen et al., 2018). Hence, it was considered justified to use attendance lists and academic tutoring records during the different phases of the study. Nonetheless, since the investigation took place in a public institution, these documents can be described but not shared in this paper as they hold confidential information related to the participants.

- Attendance lists. A document with the students' full names, which is available for educators to control attendance and register assignment submissions. These were valuable since they helped in keeping track of learners' activities in order to value how well the intervention was working.

- Academic tutoring report. A document where the teacher's support for learners is recorded. These documents, in particular, held a very important role during the research process as they would allow the researcher to take note of students' needs regarding the implementation of multimedia materials and web-based quizzes to learn the foreign language during the COVID-19 confinement period.

Semi-structured interviews. This technique may have a few predetermined questions in order to start out the inquiry with each participant; as the process goes on, researchers can come up with other questions that dig deeper into the understanding of the object of study. Moreover, with the digital resources available today, these instruments could be applied in a synchronous way (Dikilitaş & Griffiths, 2017; Cohen et al., 2018). Therefore, learners were scheduled on different dates using the application Google Meet.

The semi-structured interview forms included spaces to write down questions and observations, allowing an easy administration of the instrument. In this vein, questions were designed according to the different moments of the inquiry. The interrogations asked during each of the interviews are outlined in annex 2; nevertheless, it is important to emphasize that additional follow-up interrogations were added as each of the interviews went on in order to promote a natural and

comfortable conversation with the participants; for instance, at the beginning of the interviews learners would be asked how they were feeling or how was their day; also, if they felt comfortable, as well as more casual questions such as if they had seen a recent movie or played a particular video game.

Focus groups. The focus groups' instruments followed a very similar structure to the semi-structured interviews. The difference was that, instead of taking an interviewer role, it was necessary to act as a facilitator to control the topics and participation prompted with the designed questions (Stringer, 2007). The questions were devised in such a way that they could inspire participants to share their experiences of learning English with the use of multimedia material and online quizzes during the pandemic (See annex 3).

Survey. Lastly, a brief survey was administered in order to include as many students as possible in the study. The instrument was based on a Likert-type scale, providing five options for adolescents to share their experiences (annex 4). This type of instrument, even when it is usually used in quantitative studies, can be employed in investigations of this division since the critical paradigm focuses on surpassing the boundaries that hinder the solution to problems; therefore, the results of this instrument are reported in a more descriptive fashion parting from the researcher's inductive reasoning (Dikilitaş & Griffiths, 2017, Cohen et al., 2018). This instrument is further explained in the results section.

According to the qualitative research tradition, researchers appeal to a more convenient, flexible, and intuitive route to design investigation instruments. In this sense, the selected tools are considered valid since they are scientifically aligned and consistent with the main purpose, central question, and present object of study (Ary et al., 2010; Cohen et al., 2018).

2.2 Sampling

The main premise of action research is to solve a local issue; in this case, by innovating in two different educational scenarios where improvement of the quality education is a major goal. This suggests that no pupil can be excluded from any intervention if it means an opportunity for a better learning experience (Carr & Kemmis, 1986; Ary et al., 2010). Therefore, actions were primarily carried out with all the teenagers instructed by the researcher. Thus, a total of 415 adolescents between 15-18 years of age formed part of the investigation: 366 students from high school 1, and 49 from high school 2 (Table 1). Information was gathered over a period of 18 months, starting in January 2020 and ending in June 2021.

Table 1.
Overall universe of intervention

High school 1			
Gender	Male	Female	Total
Number	201	165	366
High school 2			
Gender	Male	Female	Total
Number	22	27	49

Source: Author's own elaboration, based on information from the high school control system.
Note: This data represents all the universe where the intervention was carried out, including the learners that decided to share their experience and those who did not.

All inclusion was considered scientifically ethical since the process implemented meant no harm for adolescents as the activities formed part of their daily learning tasks, cases in which an informed consent is not required (Stringer, 2007). Nevertheless, for publication purposes, an informed consent was used with those high schoolers who agreed to report their experiences related to the intervention and scientific analysis provided that their anonymity and confidentiality were ensured.

Successively, non-probabilistic convenience-purposive sampling was applied by locating key participants who met established criteria (Ary et al., 2010; Cohen et al., 2018). For inclusion, teenagers had to be in the researcher's class; they also needed to have answered the online quizzes or watched the video clips uploaded to YouTube by the professor. With a view towards motivating adolescents' participation, extra-credit in their final grade in the English subject was offered to students if they participated in this research; however, very few opted to report their experience notwithstanding that they were offered this benefit. Hence, only 37 (8.91%) decided to participate in semi-structured interviews, focus groups, and a survey: 20 females and 17 males between 15-17 years of age (Table 2).

Table 2.
Criterion sampling data

Research technique	Number of participants	Gender		Ages
		Female	Male	
Semi-structured interviews	12	8	4	15-17
Focus groups	5	3	2	15-17
Survey	20	9	11	15-17

Source: Author's own elaboration, based on fieldwork.
Note: Unlike Table 1, the information illustrated in this table represents the students who opted to share their experiences throughout the intervention.

2.3 Procedure

During the first phase of the action research, a diagnosis of the situation was carried out. For such a matter, data was collected mainly from participant observation, ten attendance lists where learners' assignments were registered, and a semi-structured interview administered to twelve participants through Google Meet. It is worth saying that participants were invited to be highly critical of their contributions since they were also considered co-researchers.

Information was analyzed with initial, focused, and axial coding by identifying codes as well as relationships among them to escalate data analysis to a categorical level. This permitted other categories to emerge so that they could be compared in between, what is known as the comparative method in grounded theory. The various techniques and information sources allowed not only triangulation but also comprehension of the problem, which justified the organization of an action plan to tackle the issues related to the educational experience in English learning during the COVID-19 pandemic.

The second action research phase implied the organization, implementation, and valuation of the action plan. Still, rigorous observation was necessary throughout the educational scenario during the coronavirus social lockdown, as well as active involvement from major stakeholders to modify practice. Information was collected mainly from participant observation and three focus groups organized in Google Meet to follow-up on the research project. Also, documents such as ten attendance lists where learners' assignments were registered, and six academic tutoring reports were reviewed. Since expectations were not met at first, the action research cycle had to be repeated three times by adjusting the tactic to reduce the obstacles encountered during the intervention.

The third action research phase meant an evaluation as well as a reflection where a semi-structured interview was applied to eight participants through Google Meet. Also, a brief survey was carried out, allowing a brief quantitative analysis of the overall impact of this intervention during the COVID-19 confinement period. Still, official documents were revised as they contained observation records of the whole process. Again, analysis was conducted by recurring to the grounded theory methodology to pose a substantive theory. All the information was distilled in a digital word processor, a procedure considered valid for qualitative research (San Martín-Cantero, 2014). A synthesis is shared in Figure 2.

Figure 2. Codes and categories

Diagnostic phase		
Semi-structured interviews	Documentary analysis	Participant observation
Codes		
Long-boring classes; not engaging dynamics.	Low income, vandalism; unwanted pregnancies; students with bad academic record; few adolescents being a bad influence on others; achievement in general is low.	Uninteresting classes, emotional harm; learners harder to reach; academically inactive; classes developing integrative skills; not enough participation in classes.
Coding concurrences		
Narco-culture, addictions; dysfunctional families: divorced or separated parents; low achievement, dropouts; social lockdown affecting adolescents; technology is a distractor: videogames, chatting, social, networks.		
Categories		
High schools' context, uninteresting classes, introspection, student behavior in class.		
Plan implementation and evaluation		
Focus groups	Documentary analysis	Participant observation
Codes		
Students' lack of abilities to use technology for learning; not all learners are familiar with the use of the internet; adolescents appreciating teacher's concern.	Not all students are doing academic activities; high school 2 shows less academic activity than high school 1 despite the innovation; learners again showing less academic activity; activity increased due to the broadcast list.	Learners in favor of the strategy; not all groups showing the same activity; all learners have WhatsApp; only use Microsoft Teams; ask for support to the counseling department; learners responding well to the use of the broadcast list.
Coding concurrences		
Positive attitude towards the platform; learners' technological devices cannot operate Microsoft Teams; WhatsApp as a common space for communication; learners and contexts are different; activity increasing greatly with the use of the broadcast list.		
Categories		
Excellent platform, limitations; common e-communicative space; different realities and new obstacles; personalized follow-through, and support.		
Overall evaluation		
Semi-structured interviews		Documentary analysis
Codes		
Positive learning experience; teacher employing flexible approach; intervention according to adolescents' interests; Unlimited opportunities for learners to answer quizzes a positive aspect; attractive teaching approach.		More learners are academically active; assessment easy to carry out through online quizzes.
Coding concurrences		
Multimedia material favoring learning; online quizzes easy to administrate and for learners to answer; flexibility a positive factor in the strategy.		
Categories		
Attractive and innovative humanistic approach, and easily accessible digital learning.		

Source: Author's own elaboration, parting from fieldwork

Figure 2 shows the codes identified with each research technique; these codes were later escalated to categories according to their relationship. The coding concurrences mean that the same codes were discovered using the different instruments, making it possible to triangulate and interpret data to gain a better understanding of the educational experience that learners were having with the use of multimedia material and online quizzes during the coronavirus confinement period.

Results

Next, results are presented and distributed according to the phases of the action research cycle.

3.1 Identification of problematics and areas of innovation

A series of actions were executed in January and February 2020, allowing a formal diagnosis of the educational situation. In this sense, a semi-structured interview was applied to four students through Google Meet: two from high school 1 and two from high school 2. Also, participant observation was registered digitally, and a total of 10 institutional documents such as ten attendance lists with assignment registrations and memos were as well examined. The information was transcribed and analyzed in a digital text processor by appealing to the constructivist grounded theory methods: coding, categorizing, triangulation, memo-writing, theoretical coding, and use of the constant comparative method to support findings in a substantive hypothesis. The foregoing allowed a simple, fast, flexible, and effective way to organize and analyze data, which was categorized as *high schools' context*, *student behavior in class*, and *introspection*.

High schools' context. According to the diagnosis made in the academy, 600 teenagers between 15-18 years old are part of high school 1. What is more, 480 (80%) of the students belong to the middle class, where both parents work; the other 120 (20%), whose families are dysfunctional, are also ranked in the middle to lower class. These sociocultural and family backgrounds generate diverse problems; for instance, unwanted pregnancies, addictions, aggressiveness, or vandalism, which impact learners' personal and school environments, causing apathy, low achievement, absenteeism, or dropouts. Despite such conditions, educational activities can be carried out with a certain degree of success, but this became a much more complicated issue during the COVID-19 pandemic as the confinement brought other difficulties that added to the odds against a good educational quality.

The second scenario (high school 2) is much more challenging. First, such a school operates two shifts: morning and afternoon. Two groups that add up a total of 49 students form part of this intervention

where teenagers are between 15-18 years old; many are victims of the narco-culture or hazardous drugs. Simultaneously, quite a few students have been reported to have emotional, health, academic, or economic difficulties that impede them from a successful schooling experience. Also, these groups are mainly integrated by learners rejected from other institutions because of their grades or discipline, which makes educational conditions highly adverse. Another important factor to consider is that some adolescents work since they need to support their family household, which adds to the odds against learning. In addition, coupled with the coronavirus social lockdown, these juveniles were less concerned with their educational process as many of them simply stopped doing some of the academic assignments or attending virtual classes.

Student behavior in class. As a common denominator in both school contexts, some youngsters get distracted very easily from learning with cell phones, iPads, or tablets. With these technological tools, adolescents play games and use social networks such as Facebook, WhatsApp, Twitter, or Instagram. At the same time, certain students influence their classmates negatively since they persuade them to abandon class sessions. In addition, some teenagers have shown complete absence in classes, either by not showing up or by not participating in the remote sessions held in times of social lockdown.

Introspection. English language teaching has been implemented in both high schools with a variety of possibilities that go beyond institutional syllabus boundaries. Notwithstanding that the curriculum and materials officially provided by the institution are mainly focused on developing grammatical competences, more communicative activities are fostered by appealing to the Natural Approach (Krashen & Terrell, 1983), Project-Based Learning, and Task-Based Learning (Ali, Emzir & Rafli, 2017).

The observations made preceded a more in-depth inquiry through a semi-structured interview with eight students: four from high school 1 and four from high school 2. Subsequently, the analysis of information allowed the identification of the theoretical category labeled as *uninteresting classes*.

Uninteresting classes. Low achievers alleged they would get distracted easily from topic presentations made by the teacher or their own classmates since they appeared simply "boring" or because the didactic dynamics were frankly not sufficiently engaging for them, especially in remote classes held during the coronavirus lockdown. Accordingly, student 3 commented: "...I just do not like the subject, it is not interesting enough. I get bored, and well, English definitely does not go with

me; plus, I cannot see how I can use it in my life". Similarly, other adolescents contributed with responses such as: "...I sometimes feel lost in class. My friends tend to make too much noise…that is really disturbing" (student 1). Nevertheless, this was interpreted more as a matter of opinion, seeing that others spoke in favor of the style in which classes were given: "...I love how you teach; you are very patient with us; you always motivate our participation by recording it on your list" (student 6).

3.2 Plan implementation and evaluation

A strategic plan was built to implement the intervention based on the formats proposed by Stringer (2007) and Ary et al. (2010), but also bearing in mind the interests, resources, possibilities, and limitations of this research conducted throughout the coronavirus confinement period. During such implementation, critical observation and three focus groups in Google Meet were carried out. One of the main actions in the plan concerned the creation of short video clips where some language items were explained; along with the multimedia, there was also the creation of online quizzes. The second part of the strategy dealt with sharing the quizzes and videos through the social network WhatsApp and the platform Microsoft Teams (Figure 3).

Figure 3. Video clips shared through different digital educational resources

YouTube channel: https://n9.cl/djdv8

Online quizzes in Microsoft Forms

Microsoft Teams
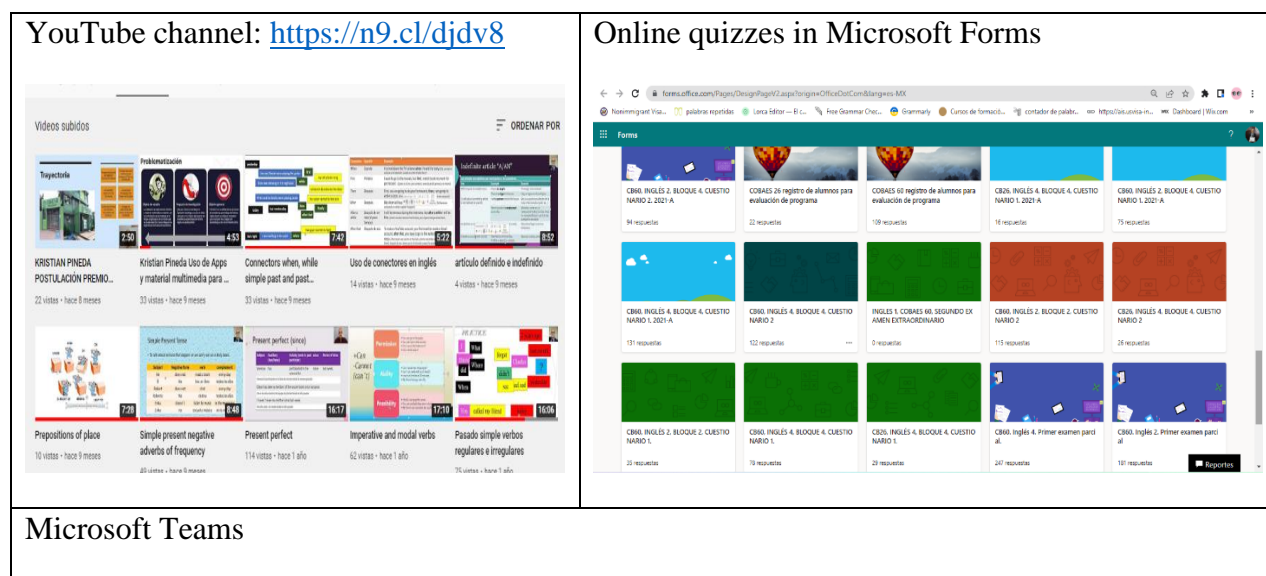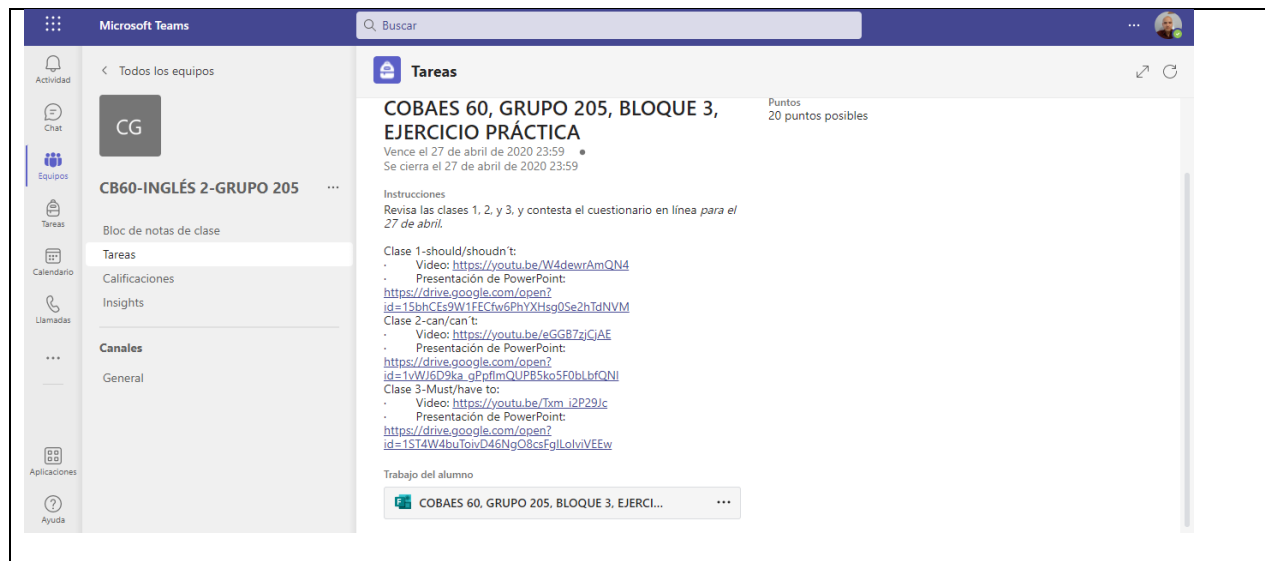
Source: Author's own elaboration

Classes which lasted between 5-10 minutes were video-recorded in PowerPoint presentations under the PPP-Presentation, Practice, Production model (Anderson, 2016). The videos started with an outline of expected learning outcomes and class purpose, followed by a grammatical explanation and application of the target language in real life. Subsequently, vocabulary pronunciation was modeled along with language exponents to promote a more "natural" input environment through digital media, seeking to reach a natural approach (Krashen & Terrell, 1983), but at a virtual level. Finally, a guided exercise was promoted in such a way that learners could pause the video and practice.

Additionally, the videos were integrated into an online quiz created for each topic and administered through Microsoft Forms in Office 365. Depending on the skill to be developed, exercises were organized into multiple-choice, ordering words, reading comprehension, vocabulary identification, open questions, among others. Microsoft Forms allowed the teacher-researcher to get a link that could be shared across any medium for individuals to easily access the material with just one click. Learners answering these quizzes was one way to verify that they had seen the videos.

Simultaneously, a review of records from 16 documents like attendance lists containing learners' assignments and tutoring reports of different academic needs were also analyzed. Focus group discussions were transcribed in a digital text processor along with constant memo-writing, which gave place to constant critical reflection on the teaching-researching process.

In both school scenarios, high and low-achievement learners, counselors, and head principals were considered as active participants in this research process since their permission, opinion, and advice were seriously contemplated for pedagogical decisions. Moreover, the students' participation was crucial since the main purpose of this research project was to improve their English learning experience throughout the coronavirus pandemic.

During the first implementation, the research techniques of participant observation, documentary analysis, and a focus group including three students from high school 1 and two from high school 2 allowed the discovery of the following theoretical categories: *excellent platform,* and *limitations*.

Excellent platform. In high schools 1 and 2, the implementation of online quizzes was first administered through Office 365 from March to April 2020. There is no doubt that this platform has magnificent tools which can provide a high-quality educational experience during the COVID-19 social lockdown. As a matter of fact, the few adolescents who were successful at interacting with such a platform stated how much they loved it: "…office 365 is an excellent experience. It is just so easy to organize my homework assignments or keep track of my learning progress" (student 2). The same feeling of satisfaction was expressed by youngsters from both campuses. However, high school 2 pupils did not respond as expected.

High school 2 adolescents were more complicated to contact even when the same attention was given to both educational communities. In fact, in most cases, counselors and professors from other subjects tried to get in touch with them but met with complete failure. Consequently, academic activity from learner to learner, group to group, and school to school remained unstable throughout the COVID-19 confinement period, which was reflected in the reports made to the institution on a weekly basis.

Limitations. The digital divide was eminent during the coronavirus confinement period since certain limitations hindered the academic strategy's success throughout this first application for both schools. During the focus group, learners reported that their portable devices did not have the capacity to operate Office 365 as they would come across different technical difficulties like taking too much time for such a platform to open or load content: "…my app just takes a lot of time to start…sometimes, it makes my cell phone freeze in the middle of something I am doing" (student 4). Thusly, other issues arouse, like a lack of skills to create digital material for educational purposes or to simply navigate on the platform: "…this is very difficult for me teacher…I don't get it. There are plenty of steps to take before I get to finally turn in my homework, and there are so many surfing options in Office 365" (student 3).

During this time, an equivalent of 149 (40.71%) students from high school 1 and 17 (34.69%) from high school 2 accomplished the online activities. This represented an alarming percentage for both contexts, which meant that something had to be done to mend the situation.

In the second implementation, data analysis was done through participant observation, documentary analysis, and a focus group including three learners from high school 1 and two from high school 2, giving place to the identification of codes which were escalated into categories labeled as *common e-communicative space*, and *different realities and new obstacles*. The prior findings led the present researcher to come up with a tactic to reduce the limitations encountered in the first implementation.

Common e-communicative space. As a solution to the issues presented during the first action research cycle, reflection was made on other possibilities to ease adolescents' access to the intervention strategy. Critical and humanistic observations were essential since WhatsApp was identified as the common social network for communication among pupils during the COVID-19 confinement period. Bearing that in mind, it was necessary to rethink the plan as part of the action research premises. Successively, the use of Office 365 was partially abandoned because very few students were actually using it. This is when WhatsApp became the main channel of educational interaction throughout May and June 2020, as the links generated in Microsoft Forms for every task employing videos with quizzes were shared via the instant messaging app.

Different realities and new obstacles. The outcomes of this action were outstanding. Learners from both scenarios were much more participative since this meant an easier way for them to access educational activities throughout the social lockdown, but again, results in high school 2 did not meet the desired expectations. One teenager commented:

> I just love these kinds of activities. You explain so well, and the assignments are so easy to answer. Above all, I can verify my grade and retry exercises as many times as I want, until I get a passing score. (Student 5)

According to the records in attendance lists, during this period, 298 (81.42%) learners from high school 1, and 33 (67.34%) from high school 2 were watching videos and responding to online quizzes. As a side tactic, critical cases were reported to both principals and counselors. This action became the core strategy for the 2020-2021 generation, but it was not long before problems started

to take place. Such a dynamic began to suffer a decline in its effectiveness by September 2020, as the percentages of students answering the tasks were decreasing even though reminders were being sent through WhatsApp groups every day, perhaps the innovative initiative had come to an end and had nothing new to offer.

Throughout the third implementation, data analysis from participant observation, documents, and a focus group integrated by three adolescents from high school 1 and two from high school 2 allowed the discovery of the main categories labeled as *personalized follow-through* and *support*. The findings led the present researcher to come up with another action to mitigate the obstacles faced in the second action research cycle.

Personalized follow-through. An educational praxis reflection was conducted to find a solution to the situation confronted in the second cycle of this intervention. As a result, from October to December 2020, the use of the WhatsApp broadcast list for a personalized follow-up and ongoing counseling support were implemented as educational strategies for the rest of the COVID-19 confinement period. The broadcast list allowed an individualized follow-up with low achievers, better than the general reminders sent via WhatsApp groups. Nevertheless, a few adolescents saw it as persecution or academic pressure, but it was more of a concern on behalf of the researcher.

Support. Constant reports of learners who were not responding to any of the activities kept on being made to principals and counselors. As a result, participation was raised to 301 (82.24%) students for high school 1, and 49 (63.26%) for high school 2, improving learners' active participation in general. These percentages were maintained by appealing to this third action research cycle strategy during the rest of the school year, that is, from January to June 2021.

3.3 Overall evaluation of the intervention

A semi-structured interview was administered through Google Meet to eight participants: four from each high school. In addition, 16 documents in the form of attendance lists as well as academic tutoring reports were also revised. Lastly, a brief survey was used to value the impact of the overall intervention during the coronavirus social lockdown. Once more, initial, focus, and axial coding were done first with the help of memo-writing. Next, theoretical categories emerged, and theoretical sampling was employed to reinforce the analysis. It is worth saying that triangulation, together with the constant comparative method, permitted a rigorous information analysis, giving place to the following substantive grounded theory.

The use of web-based quizzes that integrate video clips for English language teaching fosters a positive learning experience in high schoolers because they are inspired to flexibly interact with digital academic content in different kinds of activities. Additionally, the educational experience falls into an innovative approach since online tasks are easily accessible and are circumscribed in a technological dimension, an essential parameter for catching adolescents' interests nowadays. Conjointly, online quizzes provide an opportunity for learners to verify the language they have acquired or learned as they cannot only corroborate their answers with automatic feedback, but they can also have unlimited opportunities for reviewing videos or retrying quizzes until they get a good result. This combined strategy, however, must be implemented through channels that pupils have easy access to such as WhatsApp, Facebook, YouTube, or others that educators deem relevant. Moreover, professors should conduct follow-up strategies seeing that the teenagers' lifestyle is very dynamic and unstable, something which might hinder school success, which is why calling on support from principals or counselors is strongly advised, especially in times of social emergency like the coronavirus confinement period.

The theoretical categories that were discovered during the data analysis were: *attractive and innovative approach* and *easily accessible digital learning*.

Attractive and innovative approach. Teenagers reported having felt sensations of satisfaction in their learning experience because the number of strategies undertaken demonstrated a great deal of concern for them on behalf of the educator. Furthermore, learners indicated that videos were in some way attractive as information was appropriately used and distributed; additionally, the multimedia showed images exemplifying the target language in a juvenile way. An innovative appreciation was also interpreted from the adolescents' responses since they celebrated how this strategy allowed them to do personal activities without them overlapping with others.

Other teenagers pointed out how these videos facilitated their understanding of the language structures. A commentary said: "...the videos helped me understand the topics by giving examples, which made quizzes easier to answer" (student 12). Another learner complemented with the following expression: "…videos explained each English topic very well; plus, I was able to go back and watch them as many times as I wanted" (student 19).

Easily accessible digital learning. Learners expressed that the language instruction style applied by the researcher was way easier than those implemented by other professors during the

COVID-19 social lockdown. One reason for this is that some pupils pointed out, again, that Microsoft Office 365 was very complex to operate or because certain cell phones could not be used to navigate fluently on the platform. Some learners emphasized that the teacher-researcher should continue using the same teaching strategy as they highlighted that the assignments to learn English were very manageable and easy to solve.

A brief survey was administered to 20 adolescents through the WhatsApp social network to value the impact of the intervention. The instrument was fashioned in a Likert-type scale, but it took a different stand in its creation as action research is different from traditional investigation to meet rigor. In this sense, Stringer (2007) states that validity can be met through member checking, that is, for the data and instruments to be verified by participants. Thereby, all data was shared through WhatsApp for adolescents to verify whether the questions and interpretations reflected their actual perspectives on the lived experience. Thence, learners checked whether the item was designed pertinently, which is completely valid in research enterprises such as this one (Charmaz, 2006). On the other hand, reliability was achieved by tabulating qualitative categories in terms of percentage, which is also valid in studies of this level (Silverman, 2005), supporting the triangulation and validation of findings from previous and prominent qualitative analysis.

Adolescents were selected to answer the instrument through convenience sampling. The item stated: *the videos created on YouTube and online quizzes contributed to my learning of the English language*. Like on a traditional scale, options were presented as 1) totally disagree, 2) disagree, 3) neutral, 4) agree, and 5) totally agree (graphic 1).

Graphic 1. Overall impact of videos and online quizzes on English learning
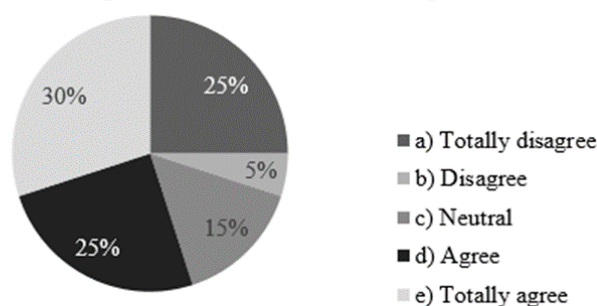
The videos created on YouTube and online quizzes contributed to my learning of the English language

Source: Author's own elaboration.

In general, this quantitative data indicated the participants' views on how the strategy was extremely good for some, but not effective for others.

More analysis was carried out by combining data from the survey, semi-structured interviews, and focus groups, which added up to 37 participants' answers to be analyzed. For that matter, data was organized into three main categories: 1) *bad experience*, by integrating *totally disagree* and *disagree* answers with negative perspectives from open questions, 2) *neutral experience* with data from the survey, and 3) *positive experience*, by combining *totally agree* and *agree* responses with those from open questions under the same category (Graphic 2).

Graphic 2. Impact of the intervention on the English learning experience
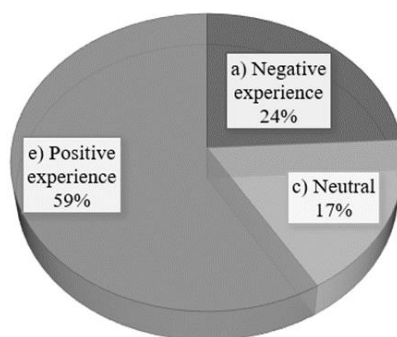
Source: Author's own elaboration.

Once more, the quantitative data reflected the participants' views on how the intervention was positive for the majority, but for a few it was not. Therefore, the qualitative analysis came in handy to gain a profounder insight into the learners' feelings towards the experiences they lived when using online quizzes and video clips to learn English during the coronavirus social lockdown.

Discussion

The strategy undertaken during the coronavirus confinement period was successful because microlearning was applied with the use of multimedia ad hoc for Generation Z individuals, which is considered an efficient tactic to increase learning opportunities (Tan & Pearce, 2011), fostering a positive experience in the participants of the present study as they were inspired to interact with digital content and an innovative approach as well as with a digital environment. In addition, it was fruitful since, unlike long-lasting traditional classes, videos and activities were covered in a few minutes, tackling this generation's weakness of having a short attention span (Seemiller & Grace, 2017). The prior was interpreted given that the high schoolers had to see the short video clips in order to do the quizzes where some answers could have

been gotten correct by chance but not others, as some were built in an open-ended format, forcing them to contribute with an elaborate answer. In addition, the use of online quizzes was thought to be effective due to the fact that language was successfully assessed by recurring to a self-level assessment. What is more, the quizzes proved to be supportive for learning throughout the school year, as pupils indicated that they enhanced instructional design and formative assessment, as other studies have shown (Cohen & Sasson, 2016). One limitation of the intervention carried out was that not all teenagers had access to technology during the COVID-19 lockdown. Such a digital divide was encountered frequently, but even though several opportunities were offered to mend these difficulties, adolescents failed to respond. In this sense, it is understood that certain requirements are needed when putting into action a digital educational strategy. As pointed out by different experts, if institutions do not ensure a minimal infrastructure for pupils, access to internet, and support for technological issues, their education system will be likely to fail (Persada et al., 2019). Additionally, knowledge and competence in the use of technology on the part of both learners and teachers are essential for a successful online learning environment (Sun, Tsai, Finger, Chen & Yeh, 2008). Another limitation was that, because of the digital divide, not all participants had access to the survey that was promoted to value the impact of the overall intervention. However, this was not a major concern seeing that the investigation was mainly qualitative, centered on generating theory and interpreting adolescents' experiences with online quizzes and video clips to learn English.

Conclusions

It can be said that the overall intervention was successful since the expected outcomes were met by enhancing the educational experience in English learning. Yet, action research is an endless cycle of systematic inquiry, and in this case, there is still a lot to be done, especially since the COVID-19 pandemic provoked different learning difficulties. Nevertheless, the evaluation of this intervention is considered important enough to be shared to other English teachers or professors of other areas. On the other hand, the general purpose of the investigation process was accomplished, allowing an improvement in the teaching-learning experience of English in high school pupils with the use of online quizzes with video clips during the coronavirus confinement period because it is interpreted that they are motivated to digitally interact with academic content, the educational experience falls into an innovative approach, additionally, online quizzes provide automatic feedback to learners to verify their learning and they also have unlimited opportunities for reviewing videos or retrying quizzes.

It can be seen how even when the same energy, passion, and enthusiasm was put into practice, results were not equivalent for both high schools. Hence, it is acknowledged that social circumstances are different and changing from time to time, and this is greatly dependent on everyone's situation. In this manner, the methodological approach employed was pertinent to the settings that were investigated as action research aims at the improvement of practice and solution to problems.

Up to now, further research will continue using this strategy, especially in circumstances where students and professors cannot meet on a regular basis or at all, that is, online, blended learning modalities, or even when emerging situations like a social lockdown impede a face-to-face interaction. Some questions for future investigations may be posed; for example: how far do videos that integrate web-based quizzes develop communicative competences? or in which way could platforms such as Microsoft Forms, Google Classroom, or others promote productive skills in a foreign language? Many other questions might be a motivation for additional studies, but the decision can only be made by the researchers themselves.

The coronavirus social lockdown brought many challenges at all levels: personal, educational, or work, but it can be seen how it is up to everyone to face it with success. For education as well as applied linguistics, the use of technological devices and social networks are ways to confront the adverse conditions posed by the confinement period. Moreover, history has taught society that formation processes need drastic changes in countless settings, and perhaps the quarantine came to be an unwanted way to provoke them. Hopefully, schools are going to continue with the employment of technology for studying, although that will greatly depend on stakeholders such as teachers, principals, deans, students, and parents.

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Annexes

Annex 1. Summary notes in participant observation

Diagnostic phase. Learners do not stay in the video classes. Very few learners participate. A lot of students have limited financial resources. It is difficult to keep the adolescents' attention during the long classes. The confinement has made it very complicated to support the learning process: answers to questions, re-explaining topics, interaction with classmates, answering books, or other types of assignments. The narco-culture and previous learning experiences have made it difficult for them, especially during the social lockdown, to have a positive learning experience. Teenagers are very fond of technology, and perhaps its incorporation can improve their educational experience in English learning.

Plan implementation. Stakeholders seem to like the idea of their learning being supported by multimedia material created by the teacher-researcher. For example, videos seem to be a great option to catch students' attention, but according to the literature review, these videos need to be short (5-10 minutes); plus, they need to be concise in explanation and use attractive resources to transmit knowledge. Adolescents agree on this matter, and thanks to the training the teacher-researcher has received in the educational technology field, it was thought that creating online quizzes using a platform could be a great way to increase students' academic activity. At first, this worked, but communication problems became apparent, for which it was necessary to use WhatsApp and its broadcast list option in order to have more effective communication with learners.

Overall evaluation. Learners reported that the strategy implemented was great since they could consult the videos at any time. Also, they said that the way topics were explained was good. Additionally, using online quizzes was a good decision as they were easy to administer. What is more, learners appreciate the fact that the teacher-researcher is using WhatsApp as the main medium to personally communicate with them.

Annex 2. Semi-structured interview format and questions asked during each interview

Interview questions for the diagnostic phase

1.-How have you lived your educational experience throughout the confinement period?

2.-What would be some aspects that could be improved in the English classes?

3.- What do you think has been affecting your classmates' performance during the social lockdown?

4.- How effective are English teaching methods employed during the quarantine?

5.-What would be a better way to conduct a class during this moment?

6.-Do you think learning English is important for your future? Why?

Interview questions for the evaluation phase

1.-How did the videos support your understanding of the different topics in the English subject?

2.-How did online quizzes support your experience in the English subject?

3.-What is your feeling about the use of technology to learn English during the confinement period?

Annex 3. Focus groups registration form

Questions for the first focus group

1.-What do you think of the use of Microsoft Teams to learn English during this pandemic?

3.-What are some positive aspects of this platform?

2.-Have you experienced any difficulties in your learning when using Microsoft Teams?

Questions for the second focus group

1.-How do you feel when using WhatsApp as the main channel of communication to learn English during the pandemic?

2.-How has the link shared through the WhatsApp group facilitated your learning experience?

Questions for the third focus group

1.- How did the videos created by the English teacher contribute to your learning of English throughout this confinement period?

2.-How did the online quizzes help you in your learning of English during this social lockdown?

3.-How do you think the combination of both tools added to your learning experience?

Annex 4. Likert type scale questionnaire

Instruction: Select the answer you prefer.

Item	Totally disagree	Disagree	Neutral	Agree	Totally agree
The videos created on YouTube and online quizzes contributed to my learning of the English language.					