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Ciencias Sociales y Humanísticas

PROYECTO DE TITULACIÓN

**"THE USE OF NEARPOD TO CONDUCT FORMATIVE
ASSESSMENT AND ITS EFFECT ON CEFR A2 LEARNERS'
GRAMMATICAL COMPETENCE IN AN ECUADORIAN PUBLIC
UNIVERSITY: AN ACTION RESEARCH STUDY"**

Previa la obtención del Título de:

**MAGISTER EN ENSEÑANZA DE INGLÉS COMO LENGUA
EXTRANJERA**

Presentado por:

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DEDICATION

I dedicate the successful completion of this thesis to my beloved parents Maritza and Hoover, whose example of hard work and perseverance has instilled in me the same values. To my siblings Edder, Daniela, Mauricio and Yorvin, and my nieces and nephew for their encouragement throughout this journey. This work is also dedicated to my friends who supported and motivated me to study this graduate program.

Hover

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ABSTRACT

The use of newer technologies in foreign language education has proved to be effective to facilitate teaching and learning (Golonka et al., 2014). The role of technology took on greater relevance for instructors and learners due to the rapid and sudden change of modality of instruction triggered by the Covid-19 pandemic, from in-person to remote. Although Zoom quickly gained popularity and was used by many instructors nationwide, this videoconferencing tool was not enough to assess language learning or promote student engagement. Therefore, this action research study intended to innovate the experience of teaching English as a foreign language (EFL) by using the Nearpod application to conduct formative assessments synchronously and determine its effect on students' grammatical competence. This quasi-experimental study was conducted at an Ecuadorian public university located in the province of Cañar with a total of 46 participants from two classes assigned to experimental and control groups. The data were collected through pre-tests and post-tests, and a survey to gather students' attitudes towards the acceptance of the app. The t-test for independent samples indicated that students in the experimental group performed slightly better than participants in the control group. Nonetheless, a t-test for paired samples to analyze a group of participants in the experimental group who had attended all synchronous sessions revealed a statistically significant improvement in their grammatical competence. As for the students' acceptance of the app, the results showed a high rate for both categories, perceived usefulness and perceived ease of use.

Keywords: EFL class, formative assessment, grammatical competence, Nearpod

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ABBREVIATIONS

CEFR	Common European Framework of Reference for Languages
CLT	Communicative language teaching
EFL	English a foreign language
ELT	English language teaching
ICT	Information and communication technologies
LMS	Learning management system
TEFL	Teaching English as a foreign language

CHAPTER 1: SUMMARY OF THE PROPOSAL

1.1 Antecedents

According to the Reglamento de Regimen Académico, [Regulation of Academic Regime, translation mine] (2019), a regulation established by the Consejo de Educación Superior (CES, acronym in Spanish) the [Higher Education Board in Ecuador, translation mine], undergraduate students are required to demonstrate at least a B1 level of proficiency in a foreign language aligned with the Common European Framework of Reference (CEFR) at the end of their degree programs. On March 26th, 2020, as a response to the Covid-19 pandemic, CES issued a transitional regulation that required higher education institutions to switch their face-to-face programs to remote teaching and learning, with up to 60 students per class. Suddenly, instructors and students had to adapt to the new study modality which included video-conferencing tools and a learning management system.

This action research study is set at a public university that implemented remote instruction. This institution also modified the curriculum of English as a Foreign Language (EFL), prioritizing the content that supports the attainment of the overall language program goals. The EFL program aims at developing linguistic skills that allow students to sustain a conversation in topics of interest, understand the main points of clear standard speech, read factual texts related to their field and interest, and write straightforward connected texts on a range of familiar subjects. Achievement tests are administered at the end of the unit to assess grammatical competence, vocabulary, reading comprehension and listening. In addition, the Pedagogical Coordination advised instructors to teach 50% of the contact hours synchronously and the remaining 50% of time asynchronously, which resulted in reduced interaction between teacher and students, and among students.

In my experience, thus far teaching remotely, it is essential to deploy methodologies and resources to assess students' participation and understanding of the content. During the synchronous sessions, I usually call on some students to participate by answering questions and I have observed that they are not responsive. When using the built-in tools of Zoom such as the chat or annotation feature, only a few students use them, and it is rather problematic to monitor whether a student is working or not. I am aware that extended hours of screen time may cause lack of interest in students, but as a professional in the ELT field, I am bound to explore the technological resources available to innovate my teaching practice.

1.2 Definition of the Problem

Different factors such as large classes with 30 to 40 students, the students' basic competence, and the perceived lack of interest in remote instruction make it difficult to conduct formative assessments that inform students' learning in real time. Therefore, I deem necessary to document the experience of including the Nearpod application (app) as a formative assessment tool with my EFL students and determine its effect on their grammatical competence. Delacruz (2014) explained that Nearpod is an app that allows teachers to create interactive presentations that can embed poll questions, videos, slides, and quizzes. Students can access Nearpod and interact with the learning materials using the web browser or the app in their smartphones, tablets, or computers.

This action research study aims to evaluate the effect of formative assessments facilitated by Nearpod on CEFR A2 learners' grammatical competence in an Ecuadorian public university. The findings of this action research will improve my professional practice to better conduct synchronous formative assessments while teaching remotely. The use of Nearpod is expected to enhance student participation, which will help learners increase their scores in grammatical competence. Besides, from a teacher's perspective, the use of this app will enrich the repertoire of tools to implement in the EFL classroom, and I will share my experience with fellow instructors teaching EFL under similar conditions.

1.3 Objectives

The general objective of this study was to determine the effect of synchronous formative assessment facilitated by Nearpod on EFL students' grammatical competence. Specifically, this study intended to:

1. Determine the English language proficiency of level 4 EFL students at a public university.
2. Compare pre-test and post-test scores on grammatical competence.
3. Establish student participation during the synchronous sessions.
4. Analyze students' attitudes about the use of Nearpod for formative assessment.

1.4 Hypotheses

H_0: Students' scores in grammatical competence will not improve after using formative assessments facilitated by Nearpod.

H_1: Students' scores in grammatical competence will improve after using formative assessments facilitated by Nearpod

1.5 Justification or Importance

The health emergency derived from the Covid-19 pandemic pushed governments to impose restrictions to prevent the spread of the virus. For most higher education institutions in Ecuador, the only way to continue with the academic activities amidst the crisis required the adaptation of the content that had been previously taught face-to-face to emergent remote instruction. The transition started in March 2020, and since then, authorities, teachers and students have been adapting to a new teaching and learning modality. Initially, teachers and students were not familiar with this type of instruction, but after more than a year, the temporary change has turned into the norm, at least in the short term (Araujo Silva et al., 2020).

Remote instruction has meant the implementation of contingency plans in an attempt to prevent student dropout, especially for students whose connectivity is rather limited. Therefore, to attain the course objectives, instructors rely on a combination of both synchronous and asynchronous activities together with technological tools to deliver content and assess learning. Undoubtedly, information and communication technologies (ICTs) have come to play an essential role in mediating teaching and learning. The use of ICTs such as learning management systems, platforms, and digital tools helps instructors to establish real-time interaction with students to support their participation and engagement in the lesson (Torres-Madroñero et al., 2020).

Although many studies have pursued to evaluate the use of different technological tools in language learning and reported positive results, to the best of my knowledge at the time of the study, there is limited research available documenting the experience of using ICTs under the unprecedented circumstances of emergent remote instruction. For that reason, this study sought to investigate the use of the Nearpod app to conduct formative assessment and its effect on university students' grammatical competence. The results of this study will be a valuable source of information for EFL instructors working in similar contexts. Finally, aligned with the objectives of the study, the following main research question was posed:

RQ1: Does the use of the App Nearpod in synchronous formative assessment influence learners' grammatical competence?

The sub-research questions explored by this study were:

RQ2: Are there meaningful differences between learners' pre and post-test scores?

RQ3: What are students' attitudes about the use of Nearpod as a formative assessment tool?

1.6 Scope of the study

The main purpose of this study was to determine the effect of synchronous formative assessment facilitated by Nearpod on EFL students' grammatical competence. In addition, the study attempted to establish if there was a difference between pre and post-test scores of learners in the experimental and control groups. This research study also aimed at collecting students' attitudes towards the use of Nearpod as a formative assessment tool by means of a questionnaire.

The study will be developed in seven chapters. The first chapter provides an overall introduction to the study, where the problem statement, objectives, hypotheses, and research questions are stated. The context of the study, a brief description of the institution, and students who participated in the study are described in Chapter two. Chapter three contains the literature review which gives accounts of the theory relevant to this research. The methodology and paradigm for this study, the sampling, the instruments to be applied, and the background of the participants in the study are presented in Chapter four. Then, Chapter five presents the results using graphs and tables, and it also includes the statistical analysis of the data obtained throughout the intervention. Chapter six includes the discussion and findings. Finally, Chapter seven indicates the conclusions reached at the end of the study and provides suggestions for further research.

CHAPTER 2: CONTEXT OF THE STUDY

2.1 Introduction

This action research study was conducted with undergraduate students in an Ecuadorian public university. These students are required to take English lessons in the Language Center and pass six levels prior to taking the institutional B1 exam, an in-house exit exam that assesses English proficiency at an intermediate level. Participants of the study were enrolled in Level 4, a 2-credit English course that corresponds to A2 in the CEFR. The researcher submitted a formal request to conduct the research, and the Head the English granted permission to develop the study (Appendix A). Thus, this action research study documented the implementation of Nearpod in a pre-intermediate EFL class over the course of a thematic unit. Despite the gradual but slow return to face-to-face instruction, remote instruction in higher education is likely to continue in our country. Therefore, it is necessary to further investigate the use of other emerging tools to engage students and support the learning of English as a foreign language in different settings, namely online or hybrid.

2.2 The institution, its students, and instructors

The public university was created in 2014 to serve the population from the Ecuadorian central and southern highlands and currently has approximately 3500 students in 7 majors in the field of education. Most students come from humble backgrounds, and the majority are first-generation university students. In this institution, the Language Center is responsible for delivering integrated EFL lessons to the undergraduate students, who must comply with the requirement of demonstrating proficiency at a B1 CEFR level if they are to graduate and receive their degrees. The English language program is organized in 6 levels with direct correspondence to the CEFR level, from A1.1 to B1.2. Each level comprises 96 credit hours per semester which lasts 16 weeks. Students attend 2-hour English sessions twice a week, totaling four contact hours with the teacher. It is worth mentioning that the teacher-researcher conducted the study to obtain the MA in TEFL.

2.3 The need for this research project

English as a foreign language is part of the Ecuadorian curriculum at all levels, from elementary school to undergraduate level (Ministerio de Educación del Ecuador, 2016). Higher education institutions in Ecuador are required to provide undergraduate students with training in a foreign language until they demonstrate proficiency at a B1

CEFR level. In terms of productive skills, learners at this level can express simple opinions on abstract/cultural matters in a limited way, write letters or make notes on familiar or predictable matters. (ALTE, 2002)

Previous research studies on ELT in the Ecuadorian context suggests that the implementation of ICT tools as part of teacher's innovation leads to better results in terms of active learning (Cabrera-Solano et al., 2020) or different language aspects such as writing (Albán-Defilippi et al., 2020), or grammar and vocabulary (Cabrera et al., 2018).

The unprecedented teaching context derived from the Covid-19 pandemic posed a major challenge to all the members of the educational communities worldwide. Governments decided to impose restrictions on their citizens disrupting their routines in an effort to reduce the spread of the virus, therefore, schools, colleges, and universities had to shift from face-to-face teaching to remote instruction in a matter of days (Further Education Trust for Leadership, 2020). Despite limited training in online teaching, instructors were expected to develop effective lessons by using tools that meet the needs of their students taking into consideration their context and access to technological devices. Lessons should be planned to increase learner's motivation, interaction, and satisfaction (Almeida et al., 2021). Hence, the implementation of Nearpod during the synchronous sessions could contribute to yielding a positive effect on students' grammatical competence. For these reasons, this inquiry is relevant, and its findings might help EFL instructors monitor students' participation while delivering engaging lessons.

2.4 Conclusion

This action research study set out to determine whether students who used the Nearpod app as part of instruction over the course of a unit would increase their grammatical competence when compared to their peers. As a teacher who has experienced emergent remote instruction for over a year, I can attest that creativity and innovation are paramount to facilitate learning. Therefore, this study sought to report the results of the use of Nearpod and the students' attitudes about the innovation.

CHAPTER 3: LITERATURE REVIEW

3.1 Introduction

This literature review aims to provide accounts of the concepts of formative assessment in English Language Teaching (ELT) and the importance of grammatical competence to develop communicative competence. This chapter also highlights the role of technology in facilitating instruction by reporting results from studies conducted to evaluate the implementation of Information and Communication Technologies (ICT) tools, paying special attention to students' attitudes. Finally, this literature review describes the characteristics of the app Nearpod emphasizing its usefulness to promote active learning.

3.2 Formative assessment

For Burden and Byrd (2013), formative assessment takes place during instruction and enables teachers to check learners' progress, give feedback and inform future instruction. Students' grasp of the content influences this ongoing process, and it can take the form of questions, writing, and short tests. In language education, Tsagari et al. (2018) view formative assessment as process-oriented and learning-oriented, whose primary purpose is to improve learning by checking students' progress. Formative assessment, also known as assessment for learning, helps teachers make decisions about the support that students need to complete a task, the use of different materials to cover a topic, or selecting the right level of difficulty for the activities.

As Hamilton (2015) highlights, the main purpose of formative assessments is not to assign students a grade but to check for understanding and identify possible gaps in learning that need to be addressed. Teachers can implement varied formative assessments to determine the concepts students struggle with, plan for future lessons, and help students self-reflect on their learning. In higher education contexts, especially when teaching large classes in lecture halls, Deal (2007) illustrates the benefits of formative assessments with the use of classroom response systems such as clickers to maintain student attention and increase engagement. By polling students with clickers, instructors receive immediate responses to the questions posed, assess student comprehension, and store data for future analysis. The data collected undergoes a thorough analysis that helps shaping future instruction.

Some authors have also emphasized that formative assessments are valuable sources of relevant information to teachers and learners as these tools inform teachers

about the effectiveness of instruction and learners about the support they need to attain higher levels of skills mastery (Cauley & McMillan, 2010). Gordon and Rajagopalan (2016) additionally explain the twofold purpose of formative assessments. First, instructors collect reliable evidence of student language learning so they can take action using instructional strategies to address specific difficulties. Second, students identify their strengths and weaknesses during instruction and receive feedback to improve language ability. When properly implemented, formative assessments set a clear path to move forward in the language learning continuum (Brown & Abeywickrama, 2018).

3.3 Grammar teaching and learning

In language education, communicative language teaching (CLT) is viewed as a highly influential approach (Purpura, 2016). According to Yule (2010), this approach to language proficiency seeks to develop communicative competence which is considered the general ability to use language. Three components are intertwined and contribute to language proficiency: grammatical competence that manifests in the accurate use of words and structures in oral and written production, socio-linguistic competence refers to using appropriate language based on the context, and finally, strategic competence which refers to the strategies that serve to overcome potential problems in communication.

Along the same line, Nation and Macalister (2009) advocate for a language curriculum that balances the four strands devoting roughly the same amount of time if a language program is to be successful. The first strand is called meaning-focused input and is related to receptive skills, listening and reading, which should be comprehensible to learners. The second strand is meaning-focused output and is related to productive skills, speaking and writing, which should be covered regularly. The third strand is language-focused learning and entails spending enough time to teach pronunciation, spelling, vocabulary, collocations, and grammar. Finally, the fourth strand is fluency development and is associated with what learners already know, these activities include familiar material and focus on communicating messages so that learners perform faster and better.

According to Azar (2007), grammar is a language component that sets the foundation for language skills development. She advocates for a grammar-based teaching methodology where learners see different examples that lead to identifying patterns in structures allowing for cognitive exploration. Likewise, Ellis (2006) asserts that grammar teaching goes beyond the presentation and practice of structures; this process uses multiple

techniques that direct students' attention to a particular form. For Ur (2011), it is not feasible to select a unique practical grammar-teaching methodology based on research because no two classes are ever the same due to different factors such as students' socio-cultural backgrounds or interests. Therefore, educators need to use professional judgement to explore the options and make informed decisions about the methodologies that best fit their students' needs based on the teaching context.

Larsen-Freeman (2015) conceptualizes language as a dynamic system, not static but constantly evolving. She proposes a framework for teaching grammar that includes three dimensions: form, meaning and use, where grammar is treated as the ability to use structures accurately, meaningfully, and appropriately (Celce-Murcia et al., 2014; Larsen-Freeman, 2017; Larsen-Freeman & Anderson, 2011). In her view, grammar teaching is not only about knowledge of rules but the development of a skill that she calls *grammaring,*

A similar idea about grammar teaching was also discussed by Thornbury (2001) where he maintains that grammar is a dynamic process. He also refers to this process as grammaring, moving from knowing the information about the structures to the active skill of using language. For this process to happen, Scrivener (2005) suggests that learners need exposure to the language coupled with activities that promote noticing, raise awareness of the items, and provide learners with opportunities to use the language themselves.

Although explanations and exercises are commonplace in foreign-language textbooks and classrooms (Ur, 2011), teachers need to continue experimenting with new practices and select the most appropriate teaching and learning techniques that help achieving the goals of the language course (Larsen-Freeman, 2015; Nation & Macalister, 2009).

3.4 Information and communication technologies in education

Golonka et al. (2014) conducted a review of more than 350 studies that included research-based evidence and supported the use of technology in foreign language teaching and learning. Their analysis suggests positive outcomes about the effectiveness of technology such as synchronous computer-mediated communication, and Web 2.0 tools. Similarly, Fabre-Merchan et al. (2017) completed an exploratory study to gather undergraduate language learners' perceptions about e-learning platforms in the Ecuadorian context. This study concluded that although perceptions are influenced by different variables, students view technology as helpful as it includes great features to learn English.

Mateo-Diaz and Rucci (2019) maintain that the inclusion of ICT in classrooms has grown rapidly over the last decade and such technological advancements require a paradigm shift regarding teaching and learning. Educators are now responsible for developing transversal skills that allow learners to find information and critically assess its usefulness. In their view, the four skills that need to be emphasized across content areas are the 4Cs that stand for collaboration, critical thinking, communication, and creativity. Cambridge University Press (2020) incorporates two more skills as part of their life competencies framework: learning to learn, and social responsibilities. As Kern (2006) contends, technology on its own does not affect language learning, but the pedagogical uses may enhance or hinder its effectiveness.

Furthermore, Larsen-Freeman and Anderson (2011) consider that technology should be integrated as part of the curriculum and not just patchily added due to its novelty. This view is supported by Gordon and Rajagopalan (2016) who argue that emerging learning concepts and research findings should guide and inform the implementation of technologies to improve educational outcomes. The role of technology then seems paramount to achieve a real transformation not only in language education but in all subject domains.

In online learning, Bates (2019) presents arguments to emphasize the importance of the teacher's presence. He further asserts that students are more likely to be successful in the online modality if they know that the instructor is following the activities and provides timely feedback to improve their learning. From a teacher's perspective, it is necessary to implement activities that increase students' social presence during the synchronous and asynchronous portions of the course to increase student accountability (Koço et al., 2015). Consequently, learners are going to have opportunities to communicate and interact among them, and the instructor can check whether students are actively participating in the lessons.

Technology offers teachers many tools to facilitate learning and assess students' understanding. Jumaat and Tasir (2014) conducted a meta-analysis on instructional scaffolding in online learning environments to identify the types of technological supports provided by instructors. The authors concluded that conceptual, procedural, strategic, and metacognitive scaffolding can impact online learning. Their findings lend support to the idea that when instructors introduce a new tool, it is necessary to provide students with

appropriate scaffolding so they are willing to work with it (Fabre-Merchan et al., 2017). After implementing an ICT innovation, teachers should reflect and analyze the results with students to make future decisions about how to improve that learning experience (Kern, 2006).

3.5 Previous studies evaluating the use of ICTs in EFL

The findings of studies evaluating the implementation of technological resources in EFL settings have reported positive results in different language domains. For example, Rofiah and Waluyo (2020) carried out a study to determine learner acceptance of Socrative, an online tool for formative assessments, with 461 students taking a general English course in a university in Thailand. After a period of 10 weeks, participants filled out a learner acceptance survey based on a model by Davis (1989, as cited in Rofiah & Waluyo, 2020) with statements related to perceptions about usefulness, ease of use, and risk or cheating. The results indicated that the learner acceptance was high as participants perceived Socrative as a useful tool that was easy to use. The authors concluded that the integration of ICT into the ELT field has the potential to provide a supportive learning experience to attain the learning objectives.

Furthermore, the results of a study by Boulaid and Moubtassime (2019) investigated the role of Kahoot, a game-based learning platform, to enhance vocabulary learning in a university in Morocco. The authors used a pre-test post-test quasi-experimental design with 69 participants, 31 participants in the control group and 38 in the experimental group, studying a Public Speaking English course in the English Department. At the end of the intervention, participants completed a questionnaire rating their satisfaction with the app. The results of the post-test showed a statistically significant difference between both groups. Likewise, students reported positive perceptions about their motivation and satisfaction with the use of Kahoot quizzes and jumbles in class.

To the researcher's knowledge, there is limited published research about the use of ICT in EFL education in Ecuador. However, Cabrera et al. (2018) conducted a study to examine the impact of supplementary materials to teach grammar and vocabulary using Pixton, an app to create digital comic strips, gathering students and teachers' perceptions. The intervention lasted four months and followed a pre/post-test quasi-experimental design with 85 and 78 participants in the experimental and control groups accordingly, in addition to 14 EFL teachers working at the same public school. The results from the tests

demonstrated that students in the experimental group outperformed their counterparts in the control group. Similarly, both students and teachers held positive views about the use of the app.

A different research study by Cabrera-Solano et al. (2020) analyzed the factors that affected student engagement when using Formative, a web-based tool to design digital assessments, with 82 undergraduate students majoring in ELT. This study followed an action-research approach, and the researchers used a class observation checklist and a perceptions questionnaire to collect the data. The study revealed that motivation, engagement, participation, dynamic work, and reduced anxiety contributed to students' active learning. Regarding students' perceptions, the items from the questionnaire at the end of the study revealed that students perceived the tool as useful to encourage their participation and motivation during class activities.

3.6 Nearpod as a tool to support active learning

As instructors find it challenging to replicate the face-to-face classroom dynamics in online learning environments, there is a continuous search for implementing instructional tools that enhance interaction and engagement (Milligan, 2020). For Davis et al. (2019), the app Nearpod (https://www.nearpod.com) has features that prompt students to interact with the content as they would do it in an in-person setting. Nearpod is an online student response system to engage students, and it can be used on the web browser or the app (Ferdig et al., 2020; Sanmugam et al., 2019). Nearpod is a platform that has a free version (silver) and two commercial editions (gold and platinum), whose main differences rely on the storage capacity and the number of students that can join the lesson (Tornwall et al., 2020).

Teachers can create a presentation directly on Nearpod or import an existing PowerPoint presentation and then embed audios, videos, documents, and links (Sanmugam et al., 2019). To build interactive lessons, it is possible to incorporate activities such as polls, multiple-choice questions, matching keywords, fill in the blanks, and collaborate boards (Davis et al., 2019). Other activities include the draw-it function, where students can type an extended response or create a visual representation, and open-ended questions that let participants enter a text or record an audio (Somner, 2017). An additional activity is called time to climb, whereby students can demonstrate their learning while playing (Appendix B contains previews of the activities described in this paragraph).

Once the Nearpod lessons are ready, the instructor can launch them live or student paced. The former gives students access to the content to complete the activities as the teacher advances the slides in the presentation. The latter gives students the freedom to move through the presentation and complete the tasks at their own pace. During synchronous sessions, the teacher generates a Nearpod code that students use to join the lesson. Upon entry, students need to enter their names, which helps the instructor keep track of students' progress by checking the responses in the dashboard (Delacruz, 2014).

From an instructor's standpoint, Hakami (2020) argues that Nearpod is a comprehensive tool that controls the learning materials presented to the class and facilitates learning through different types of activities to check for comprehension at the moment of instruction. A recent study on student engagement in different settings by Raes et al. (2020) concluded that interaction and social presence were determining factors to be engaged during the course. In the same way, the use of polls and quizzes via the institutional platform positively affected motivation in all learning settings. These findings echoed Raes et al. (2019) who recommend cognitively activating students through interactive tasks, and McClean and Crowe (2017) who proved that the interactive nature of the Nearpod activities engages students with the material in the classroom and promotes active learning.

3.7 Conclusion

This literature review provided a conceptual framework about formative assessment and the role of grammatical competence in developing English language proficiency. This section also highlighted the importance of using ICTs in the classroom by reviewing studies that implemented technological resources to support language instruction. Finally, it provided a thorough description of the Nearpod features that can be used during synchronous sessions in remote teaching. Although the available literature regarding the use of Nearpod has reported positive results, most of the studies were conducted when face-to-face instruction was the norm and in fields unrelated to ELT.

CHAPTER 4: RESEARCH METHODOLOGY

4.1 Research paradigm

According to Bryman (2012), a paradigm refers to the set of beliefs that guide the research process not only in connection with the research procedures but also in how results should be interpreted. These assumptions are described in terms of ontology, epistemology, and methodology.

The worldview that the teacher-researcher ascribes to is more holistic and can be best described ontologically by pragmatism. Creswell (2014) maintains that pragmatism is concerned with applications and solutions to problems, allowing researchers to choose any methods, techniques, and procedures that they deem useful to reach their research objective. Under the pragmatic ontology, the practical nature of research enables the researcher to follow any approach, be it quantitative or qualitative, or even combination of both (Cohen et al., 2018).

In this study, there is a dominant post-positivist epistemology given that the teacher-researcher wanted to test the effect of an intervention (the use of Nearpod to conduct formative assessments) on students' learning (grammatical competence). Therefore, the use of an action research methodology was considered appropriate (Tekin & Kotaman, 2013).

For Cohen et al., (2018), action research is a research methodology for practitioners to bring about change in their classrooms. Likewise, Creswell (2012) asserts that action research is used by teachers seeking to improve educational practice and can gather either quantitative or qualitative data. The teacher-researcher decided to rely only on quantitative data to obtain measures of the impact of the treatment and test the hypothesis.

4.1.1 Definition and rationale

This action research study outlined an experimental design with two groups, an experimental and a control group. Experimental designs are procedures used in quantitative research to test the impact of an intervention on the outcome or dependent variable. In education, quasi-experiments are common due to the use of intact groups as the researcher cannot randomly assign participants to groups (Creswell, 2012). As a result, this design is suitable because it aims at determining the effect of the intervention, that is, the use of the Nearpod app in synchronous formative assessments on the learners' grammatical

competence. The instruments used in the study favor the characteristics of quantitative research.

4.1.2 Methodological stances

4.1.2.1 Researcher and participants' roles

The role of the teacher-researcher entailed planning the lessons based on the contents detailed in the syllabus. Given that classes were canceled during the second week of the intervention due to institutional guidelines, the original six synchronous lessons had to be adapted and covered in five lessons. The teacher-researcher oversaw the delivery of the lessons synchronously to both the experimental and control groups.

The participants' role was specified in the informed consent which was translated into Spanish to ease comprehension (Appendix G). During the intervention, participants had to join the five synchronous sessions that lasted 60 minutes each and take part in the activities planned by the teacher. It is worth mentioning that students from both groups took a grammar pre-test and post-test to determine their mastery of the grammar before and after the intervention. Students in the control group received content instruction using PowerPoint slides delivered via Zoom, whereas students in the experimental group used Nearpod integrated in Zoom. This integration does not take place by default, so the teacher shared the invitation link in the chat. Participants in the experimental group were asked to follow the link to the Nearpod lesson and work on the tasks and activities designed for that class. At the end of the intervention, participants filled out a survey, evaluating their experience with Nearpod. The silver (free) version of the Nearpod app was used in the intervention as the student population of the experimental group did not surpass the limit (40 students for the free version).

4.1.2.2 Nature of the research design

This study followed an action research approach which is led by practitioners to address problems identified in their settings and act upon them to improve professional practice (Cohen et al., 2018). This action research study used an experimental and a control group not randomly assigned, often referred to as a nonequivalent (pre-test and post-test) control-group design (Creswell, 2014). Under this specific design, both groups have to take a pre-test and post-test, the main difference being the intervention in the experimental group.

Although action research studies may collect both quantitative and qualitative data

(Bryman, 2012), this research only relied on quantitative data gathered through tests and surveys applied to participants. The tests yielded results about participants' language proficiency, and their grammatical competence before and after the intervention. The survey collected numeric descriptions of attitudes through a Likert scale, where participants in the experimental group rated their experience with the Nearpod app after the intervention.

4.1.2.3 Nature of data analysis

The teacher-researcher planned a quasi-experimental design with a pre- and post-test to study the effect of formative assessments facilitated by Nearpod on students' grammatical competence. Descriptive statistics and frequency distributions were used to organize the data gathered in the study. Moreover, the researcher used histograms and central tendency measures to represent and analyze the scores to compare the groups. Finally, to test the null hypothesis of this study that claims that students' scores in grammatical competence will not improve after using formative assessments facilitated by Nearpod, the teacher-researcher used two types of t-Test: for independent samples, the experimental and control group, and for paired-samples to compare progress within participants in the experimental group (Gravetter & Wallnau, 2010). The teacher-researcher used Microsoft Excel to aid the processing of data and perform the analyses aforementioned.

4.1.2.4 Nature of outputs

The instruments used in this study generated numerical data. Firstly, the pre-test and post-test were scored over 20 points; these grammar tests were adapted from the American English File 1B coursebook (Latham-Koenig et al., 2013). The survey to collect students' attitudes about their evaluation of Nearpod was adapted from a study by Rofiah and Waluyo (2020) and was used with permission of one of the authors (Appendix E). The survey consisted of 10 statements that students had to rate on a 4-point Likert scale from 4 (strongly agree) to 1 (strongly disagree). Comparisons between the experimental and control groups were possible because the data included the participants' scores.

4.2 Research tradition

4.2.1 Definition and rationale

This action research study employed instruments to collect quantitative or numerical data. The main purpose of this experimental design was to establish the impact

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of the independent variable (the use of Nearpod) on the dependent variable (grammatical competence). Therefore, the teacher-researcher planned the intervention to determine the effect of formative assessments using the app Nearpod on EFL university students' grammatical competence. In light of remote instruction as the norm, the research study also collected students' attitudes towards their experience with Nearpod in the synchronous sessions during the intervention.

4.2.2 Type

Miles (2011, as cited in Creswell, 2012) identifies two types of action research designs: practical action research and participatory action research. The former seeks to research the teachers' own classroom to improve students' learning, and the latter has a broader focus beyond the classroom that emphasizes change in our society. Therefore, this study is in line with the practical action research design as it was conducted in the teacher's class to improve students' learning and professional practice.

4.2.3 Ascertaining the warrant for the study

To address threats to internal validity, the researcher made decisions about the instrumentation. Firstly, the researcher asked for and was granted permission to use the validated test A2 Key from Cambridge Assessment English publicly available online: https://www.cambridgeenglish.org/exams-and-tests/key/preparation/ (Appendix C). The original test was adapted by removing the speaking section, with three sections remaining: reading, writing and listening. The teacher piloted the test with a group of 27 students from a different class. This pilot helped the researcher anticipate and overcome problems related to procedures, as it was the case with the listening section. The test was administered online through the Moodle platform because participants were used to that learning management system (LMS) and it helped determine the English language proficiency of participants in the experimental and control groups.

The second instrument was a grammar test that served the purpose of pre- and post-test. The questions were taken from teacher's resources pack available to faculty as part of the agreement with the publishing house that represents the American English File (1B) coursebook series used at this institution. Two versions of the test were devised to avoid students remembering responses as they became familiar with the questions. Bryman (2012) suggests that people with experience or expertise in a field could act as judges to determine the validity of an instrument. Therefore, a panel of three fellow EFL instructors

revised that the two versions of the test were identical in terms of the design, number of questions, and types of questions. (See appendix D)

The third instrument was the Learner acceptance survey adapted from a study by Rofiah and Waluyo (2020). The researcher contacted one of the authors and asked for permission to use and adapt this instrument (Appendix E). The original survey had statements related to three categories, but this study only relied on two of them: perceived usefulness and perceived ease of use. The first category includes 5 statements that collect students' perceptions on the usefulness of the app, and the second category with 5 statements that assess students' perceptions on the ease to use the app. The authors reported the Cronbach's alpha for the subscales as follows: perceived usefulness ($\alpha =$ 0.915) and for perceived ease of use ($\alpha = 0.900$) which represent high internal consistency. After surveying participants in the experimental group, the results in this study were similar with values of ($\alpha = 0.960$) and ($\alpha = 0.959$) accordingly. Additionally, to avoid any misunderstandings with the statements in the survey, it was translated into Spanish. A fully bilingual colleague, currently serving as the head of English at a private university in Guayaquil, revised the translation and certified that it was accurate. (Appendix F).

4.2.4 Ethical considerations.

To ensure an ethical procedure, the teacher-researcher posted the Nearpod lessons to the learning management system (LMS) so that students from the control group could access and review those materials asynchronously (see Appendix J). In addition, the following unit for the control group was also delivered using the Nearpod app to allow students to have the same experience synchronously.

An online Google form containing the informed consent was sent out to students via email and they filled it out accepting to take part in the study (Appendix G). The consent form was adapted from the MATEFL thesis handbook approved by the academic committee and it was translated into Spanish to avoid any misunderstandings arising from students' English language proficiency. The form included a detailed description of the procedures and purpose of the project as well as the researcher's contact details and the supervisor's email in case participants needed further information about the project. Four students registered in the course decided not to take part in the study given that they would miss some synchronous sessions due to personal circumstances. Participants' information was confidential before, during and after the collection of data, and their names were

anonymized to address the issue of privacy (Ary et al., 2010).

4.3 Method

4.3.1 Definition and characteristics

This study used quantitative research methods for data collection. Firstly, an adaptation of the A2 Key test was used to define the English level of the participants, whose results were expressed in the Cambridge English Scale, up to 140 points. (Cambridge Assessment English, 2020). The grammar pre-test and post-tests were scored over 20 points and were adapted from the American English File 1B teacher's guide. At the end of the treatment, participants filled out the Learner acceptance survey to collect information about their attitudes regarding the usefulness and ease of use of the app Nearpod.

4.3.2 Methods of data collection

Once the teacher-researcher was granted permission by the Director of the language center to conduct the study in this public university (see Appendix A), the A2 Key test was given to students to determine their English language proficiency (Appendix C). Students from both groups took the exam at the beginning of the academic period and this served the purpose of diagnostic. The test was adapted and assessed the receptive skills of reading and listening, and the productive skill of writing. It is worth mentioning that the researcher used the writing assessment scale allocating individual scores for content, organization, and language. (Appendix H).

Since the main research question was related to the effect of the use of the app Nearpod in synchronous formative assessment on learners' grammatical competence, the scores of a grammar pre-test and post-test were used to compare the experimental and control groups. These results answered the research question about differences between both groups. Lastly, to address the third question about students' attitudes towards the use of Nearpod, participants responded the Learner acceptance survey. (Appendix I).

4.3.3 Selection and handling of data

Given the context of remote instruction, the instruments were posted to the institutional LMS so that participants could have direct access to complete the diagnostic test as well as the pre- and post-test. Students were monitored via Zoom while they were completing the tasks to ensure honesty. The gap filling questions in the reading and listening sections, and the open-ended questions in the writing section of the A2 Key test

were graded manually. The results for each individual questions were downloaded as a spreadsheet that aided the analysis and discussion of findings. The Learner acceptance survey was developed as a Google Form and sent to students who agreed to participate via email.

4.3.4 Participants

Participants in this study were 46 students enrolled in an elementary class from a general English course in a public university in Ecuador. Participants had already taken three levels of EFL instruction, and they started Level 4 that corresponds to A2 level according to the Common European Framework (CEFR). This small-scale research used two intact classes assigned to experimental and control groups. The experimental group consisted of 34 students, of whom 30 students agreed to participate in the study. As for the control group, the class consisted of 16 students.

4.3.5 Selection and/or sampling

This action research study used a convenience sample, which is a non-probability type of sampling (Bryman, 2012, p. 201). The convenience sample was selected because of its availability and ease of access to the teacher-researcher (Ary et al., 2010). Two classes of the same English level were purposefully assigned to the teacher-researcher to meet the requirement of the number of participants established in the MATEFL thesis handbook. As a result, the teacher-researcher requested the participation of undergraduate students enrolled in both classes of English 4, which corresponds to A2 level in the CEFR.

4.3.6 Background of the participants

The participants of this study had received English for 6 years as a compulsory subject during their secondary education (Ministerio de Educación del Ecuador, 2016). As part of the English language program at the language center, participants had taken EFL for 3 semesters, 2 of them by means of remote instruction due to the Covid-19 pandemic. The participants were majoring in Early Childhood Education, and Basic Education, and their ages ranged from 19 to 28 years. Both groups had male and female students and shared Spanish as their L1. At the time of the study, participants were enrolled in the first academic semester 2021 (April - August), and they were taught by the teacher-researcher who was completing the master's program in TEFL. Table 4.1 summarizes the information about participants.

Table 4. 1

Background of the participants

Group	Age Mean	Gender		Major	
		Male	Female	Early Childhood	Basic Education
Control group	21.6	4	12	15	1
Experimental group	21.1	8	22	9	21

4.4 Conclusion

      This chapter gave accounts of the research tradition, method, sampling, instruments, and procedures to collect and analyze the data. In short, this quasi-experimental action research study took place in an Ecuadorian public university for a period of three weeks. The participants received content instruction via Zoom and engaged in language skills development tasks through the app Nearpod. The instruments used in the study were the A2 Key test, a grammar pre-test and post-test, and a survey. The following chapter presents the results, data analysis and findings.

CHAPTER 5: PRESENTATION OF FINDINGS

5.1 Findings

      5.1.1 Diagnostic test

        At the beginning of the research process, participants in the experimental and control groups took a diagnostic test to define their English language proficiency in line with the CEFR. The test was adapted from the A2 Key exam from Cambridge Assessment English and included three sections: reading, listening, and writing. The answer key for the reading and listening sections guided the scoring process, whereas an analytic rubric was used for the writing section. The results from each skill were converted to Cambridge English Scale scores and originally the overall score is calculated by adding up all the individual scores and then dividing by four. However, since the researcher did not include the speaking section, the overall sum was divided by three. The minimum score to be categorized as an A2 learner is a score of 120 in the Cambridge English Scale, and tables 5.1 and 5.2 present those results.

Table 5. 1

Diagnostic test results in the control group

Student	Cambridge English Scale score
1	117
2	124
3	109
4	134
5	99
6	101
7	111
8	113
9	132
10	121
11	105
12	102
13	116
14	115
15	101
16	103

Table 5. 2

Diagnostic test results in the experimental group

Student	Cambridge English Scale score
1	111
2	98
3	96
4	102
5	114
6	108
7	121
8	93
9	101
10	114
11	111
12	110
13	103
14	126
15	104
16	92
17	116
18	93
19	99
20	103
21	108
22	118
23	130
24	124
25	106
26	106
27	113
28	103
29	105
30	110

5.1.1 Pre and Post-test

The grammar pre-test and post-test were created using the question bank from the American English File 1B (Latham-Koenig et al., 2013). Three EFL language instructors revised the two test versions containing 20 questions each and confirmed that they were well-elaborated (Appendix D). As remote instruction was the norm during the research process, the tests were administered via the institution's learning management system - Moodle, and the teacher-researcher monitored students synchronously using Zoom. Tables

5.3 and 5.4 contain the pre-test results for the control and experimental groups accordingly, where 1 indicates a correct answer and 0 an incorrect answer.

Table 5. 3

Results of the pre-test in the control group

Student	Question																				Score / 20
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
1	1	1	1	1	1	1	1	1	0	1	1	1	1	0	1	0	1	0	0	0	14
2	0	0	0	1	0	0	0	1	1	1	1	0	1	0	0	1	1	1	1	0	10
3	1	0	1	0	1	0	1	1	0	1	0	0	1	1	0	0	0	0	0	1	9
4	1	1	0	1	0	1	1	1	0	1	1	0	1	0	0	0	0	1	1	0	11
5	0	0	0	0	1	0	1	1	0	1	0	1	1	1	0	0	0	0	0	1	8
6	1	1	0	1	0	1	1	1	1	1	0	0	0	0	1	1	1	0	1	1	13
7	0	1	0	0	1	1	1	1	1	1	0	1	1	1	0	1	0	0	0	1	12
8	1	0	0	1	0	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	15
9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	0	1	17
10	1	1	0	1	1	1	0	1	0	1	1	1	1	1	0	1	1	0	1	1	15
11	1	1	0	1	1	1	0	1	1	1	1	1	1	1	0	1	1	1	1	1	17
12	1	0	0	1	1	1	0	1	1	1	1	1	0	1	0	0	1	1	0	0	12
13	0	0	0	1	1	1	1	1	0	1	0	1	1	1	0	1	1	1	1	1	14
14	1	1	1	1	1	1	1	0	0	1	0	1	0	0	1	0	0	0	0	0	10
15	1	1	1	1	1	0	1	1	1	1	0	1	1	1	0	1	0	1	1	1	16
16	1	0	1	1	1	1	0	1	0	1	0	0	0	1	0	0	0	0	1	1	10

Table 5. 4

Results of the pre-test in the experimental group

Student	Question																				Score / 20
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
1	1	0	0	1	1	1	0	1	1	1	1	1	1	1	0	1	1	0	1	1	15
2	1	0	0	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	1	0	6
3	0	1	0	0	0	1	0	1	0	1	0	1	1	1	0	0	1	1	1	1	11
4	1	1	0	1	1	1	0	1	0	1	1	1	1	1	0	1	0	1	1	0	14
5	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	17
6	1	1	1	1	1	1	1	0	1	1	1	1	0	1	0	1	1	0	0	1	15
7	1	0	0	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0	1	1	16
8	0	1	0	1	1	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	12
9	1	1	0	0	1	1	1	1	0	0	0	0	0	1	1	0	0	1	1	0	10
10	1	1	0	0	1	1	0	1	0	0	0	0	0	1	0	0	1	1	0	0	8
11	1	0	0	1	0	0	0	0	0	0	1	1	1	1	0	1	1	1	1	1	11

Student	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Score
12	0	1	0	1	1	1	1	1	0	1	0	1	0	0	1	1	1	1	1	1	14
13	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	16
14	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	19
15	0	0	0	1	0	0	1	1	1	1	1	1	0	1	0	1	1	1	1	1	13
16	1	1	0	1	1	0	1	0	0	1	1	1	0	0	0	0	0	0	0	1	9
17	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	16
18	1	1	0	1	1	1	1	1	1	1	1	0	0	1	0	0	1	0	1	0	13
19	0	1	0	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0	1	1	16
20	0	1	0	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	0	14
21	0	1	0	1	0	1	1	1	1	1	0	1	1	1	0	0	1	1	1	1	14
22	0	0	0	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0	1	1	15
23	1	1	0	1	0	1	1	1	0	1	1	1	0	1	1	1	0	1	1	1	15
24	1	1	1	0	1	1	1	1	1	1	0	1	1	0	1	1	0	0	0	0	13
25	0	0	0	1	1	1	1	1	1	1	0	1	1	1	0	0	1	0	1	1	13
26	1	1	1	1	1	1	1	1	1	0	0	1	0	1	0	1	0	1	1	1	15
27	0	1	0	1	1	0	1	1	0	1	1	0	0	1	0	0	0	0	0	0	8
28	1	0	0	0	1	0	0	1	0	1	0	0	1	0	0	0	0	1	1	0	7
29	0	1	0	1	0	1	1	1	0	1	1	0	1	0	0	0	1	1	1	1	12
30	0	0	1	0	1	1	1	1	0	0	0	0	1	1	0	0	0	0	1	1	9

Once participants took the pre-test, the teacher-researcher implemented the innovation using the app Nearpod during the synchronous sessions with the experimental group. Each synchronous session was 60 minutes long, and the entire intervention was conducted throughout five sessions in three weeks. At the end of the intervention, participants from the control and experimental groups took a post-test and tables 5.5 and 5.6 contain those results.

Table 5. 5

Results of the post-test in the control group

Student	\multicolumn{20}{c}{Question}	Score / 20
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
1	1	1	0	0	1	1	1	0	1	1	0	1	1	0	0	1	0	1	1	1	13
2	1	1	1	1	0	1	1	1	1	1	1	1	1	0	1	0	1	1	1	1	17
3	0	1	0	1	1	0	1	1	1	0	0	1	1	0	0	0	0	1	0	1	10
4	1	0	1	1	0	1	1	1	1	1	1	1	1	0	0	0	0	1	0	1	13
5	0	1	0	1	1	0	1	1	0	0	1	0	1	0	0	0	0	0	0	0	7
6	1	1	0	1	1	1	1	1	1	0	1	1	1	0	1	1	1	1	0	1	16
7	1	1	1	0	0	1	1	0	0	1	0	1	1	0	1	1	1	1	0	1	13
8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	19
9	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0	1	18
10	1	1	1	1	0	1	1	1	1	1	1	1	1	0	1	1	0	1	1	1	17

Student	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Score
11	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	1	0	1	17
12	1	1	1	1	0	1	1	1	0	0	1	1	1	0	1	1	1	1	0	1	15
13	0	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	18
14	1	1	1	0	1	0	1	0	1	1	0	0	0	0	1	0	0	1	1	0	10
15	1	1	0	0	0	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	16
16	1	1	1	1	1	0	1	1	1	1	1	1	1	0	1	0	1	0	0	0	14

Table 5. 6

Results of the post-test in the experimental group

Student	Question																				Score / 20
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	20
2	1	1	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	1	0	1	10
3	0	1	0	0	0	1	1	1	1	1	0	1	1	1	1	0	1	1	0	1	13
4	1	1	0	0	0	1	1	0	1	0	0	1	1	0	1	0	0	1	0	1	10
5	1	0	1	0	0	1	1	0	1	1	1	1	1	0	1	1	1	1	1	1	15
6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	20
7	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	18
8	1	1	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	1	0	1	13
9	0	1	0	0	0	1	1	1	0	1	1	1	1	1	1	1	0	1	1	1	14
10	1	0	1	1	1	1	1	1	1	1	0	1	1	0	1	1	1	1	1	1	17
11	1	0	1	1	1	0	1	0	1	1	0	1	1	1	1	1	0	0	1	1	14
12	1	1	0	0	0	1	1	0	1	1	0	1	1	0	1	1	0	1	0	1	12
13	1	1	1	1	1	0	1	1	1	1	1	1	1	0	1	1	1	1	1	1	18
14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	20
15	1	1	1	1	0	0	1	1	0	1	1	1	1	0	1	1	1	1	1	1	16
16	1	1	0	1	0	1	1	1	1	0	1	1	1	0	1	0	1	0	1	1	14
17	1	1	0	1	0	1	1	1	1	1	0	1	0	1	1	1	0	1	1	1	15
18	1	0	0	0	0	1	1	1	0	0	1	1	0	0	1	0	0	1	1	1	10
19	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	18
20	1	1	1	1	1	1	1	1	0	0	1	1	0	1	1	0	1	1	1	1	16
21	1	1	1	1	0	0	1	1	1	1	1	1	1	0	0	1	0	1	1	1	15
22	1	1	1	1	1	0	1	1	0	1	1	1	0	0	0	1	1	1	1	1	15
23	0	1	1	1	1	1	1	1	1	0	0	1	1	0	1	1	0	1	1	1	15
24	1	1	1	1	0	0	1	1	1	1	1	1	1	0	1	1	0	1	1	1	16
25	1	1	1	1	1	1	1	0	1	1	1	1	1	0	1	1	1	1	1	1	18
26	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	18
27	1	1	1	1	1	1	1	1	0	1	1	1	1	0	0	0	0	0	0	0	12
28	0	1	0	1	1	0	0	1	1	0	0	1	0	0	1	0	0	1	1	1	10
29	0	1	0	0	1	1	1	0	0	1	1	1	0	1	1	0	1	1	1	1	13
30	0	1	0	0	0	1	1	1	0	0	1	1	1	1	1	1	0	1	1	1	13

Finally, to collect students' perceptions about using Nearpod during classes, participants from the experimental group filled out an electronic survey via Google forms after completing the post-test. The Learner acceptance survey was adapted and used with the permission of Rofiah and Waluyo (2020), who conducted a study to investigate learner acceptance of Socrative for vocabulary tests in an EFL class in Thailand. The resulting questionnaire included ten questions that students had to rate in a 4-point Likert scale from (4) strongly agree, (3) agree, (2) disagree, and (1) strongly disagree. The table below (Table 5.7) includes the results of the questionnaire.

Table 5. 7

Results of the Learner acceptance survey in the experimental group

Acceptance item	Rating Scales			
	(4) Strongly agree	(3) Agree	(2) Disagree	(1) Strongly disagree
Perceived usefulness				
1. Nearpod is a good tool for formative assessments."	18	8	1	3
2. Nearpod is effective for formative assessments.	14	12	1	3
3. Nearpod is useful to participate during the synchronous sessions.	15	12	0	3
4. Nearpod enhances my experience in online classes.	13	13	1	3
5. Nearpod should be used in all synchronous sessions.	14	11	2	3
Perceived ease of use				
6. Nearpod is easy to use.	15	9	4	2
7. Nearpod is clear and understandable.	14	11	2	3
8. Nearpod is flexible to interact with.	13	13	2	2
9. It is easy to become skillful at using Nearpod.	14	12	1	3
10. Operating Nearpod is easy, either on the website or the application	13	12	4	1

5.1.2 Results

The diagnostic test, A2 Key from Cambridge, yielded similar results for the experimental and control groups. After calculating the mean or the average of the scores, and the standard deviation, which gives information about how scores are distributed around the mean (Gravetter & Wallnau, 2010), it is possible to claim that both groups had a similar level of English language proficiency as the variability is similar, see Table 5.8.

Table 5. 8

Mean and Standard Deviation of the diagnostic test

	Mean	Standard Deviation
Control group	112.76	10.96
Experimental group	107.88	9.77

As part of the research, participants took a grammar pre-test and post-test to keep records of their performance before and after the intervention. Table 5.9 contains the mean and standard deviation of the results for both groups.

Table 5. 9

Means and Standard Deviations of the pre-test and post-test

Group	Pre-test		Post-test	
	Mean	Standard Deviation	Mean	Standard Deviation
Control group	12.69	2.87	14.56	3.39
Experimental group	12.87	3.20	14.93	3.02

Likewise, Figures 5.1 and 5.2 illustrate the scores for participants in the control and experimental groups.

Figure 5. 1

Pre-test and post-test results in the control group
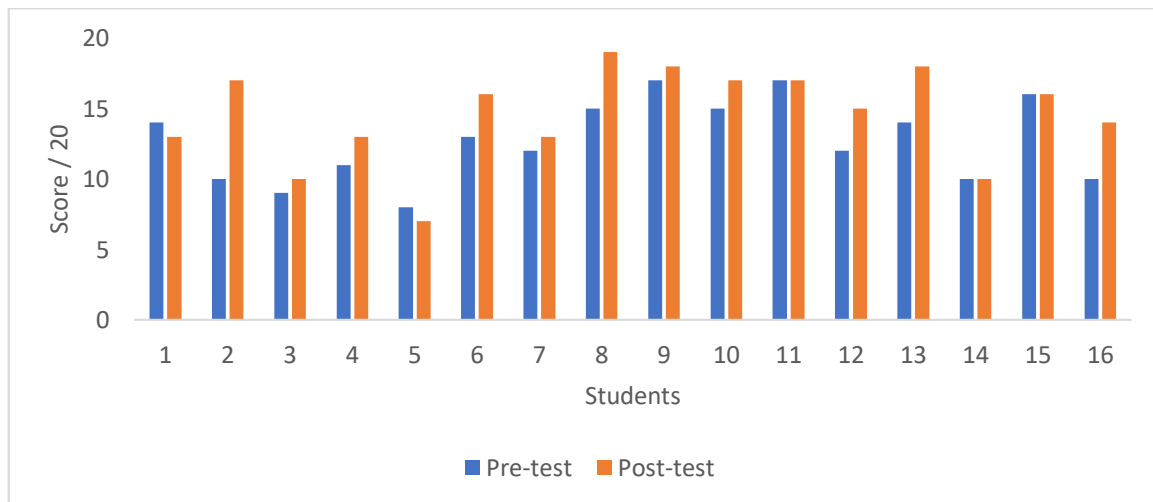
Figure 5. 2

Pre-test and post-test results in the experimental group
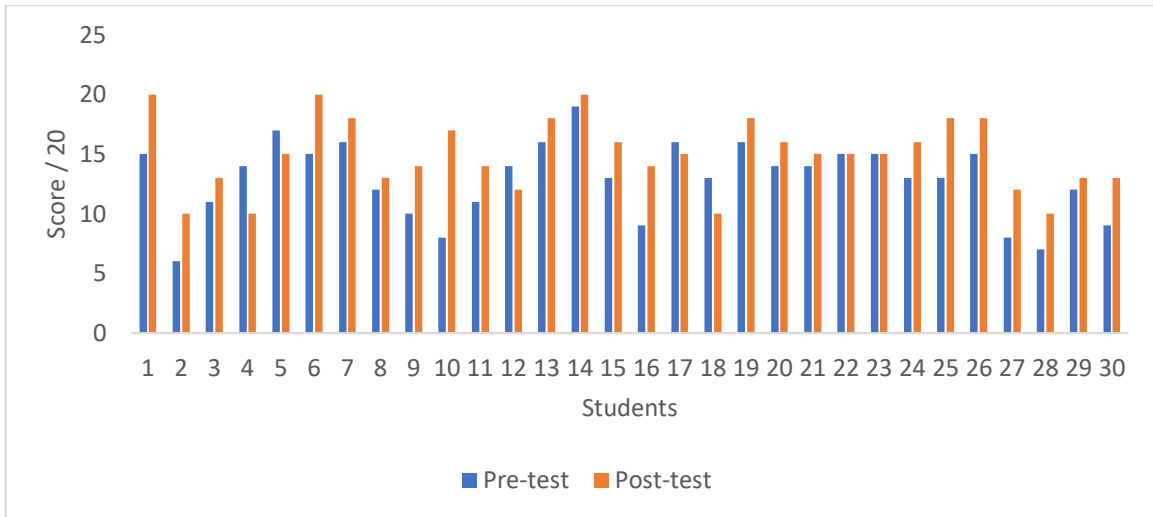
The previous figures showcase small differences between the pre-test and post-test scores for both groups, hence a more detailed analysis about the distribution and variance of the scores is necessary to draw conclusions.

Moreover, given that the main objective of this research study was to determine the effect of synchronous formative assessment facilitated by Nearpod on EFL students' grammatical competence, the results of students who missed out 1 or more synchronous sessions will not be taken into consideration. Figure 5.3 indicates the percentage of attendance for each synchronous session throughout the intervention.

Figure 5. 3

Percentage of student attendance
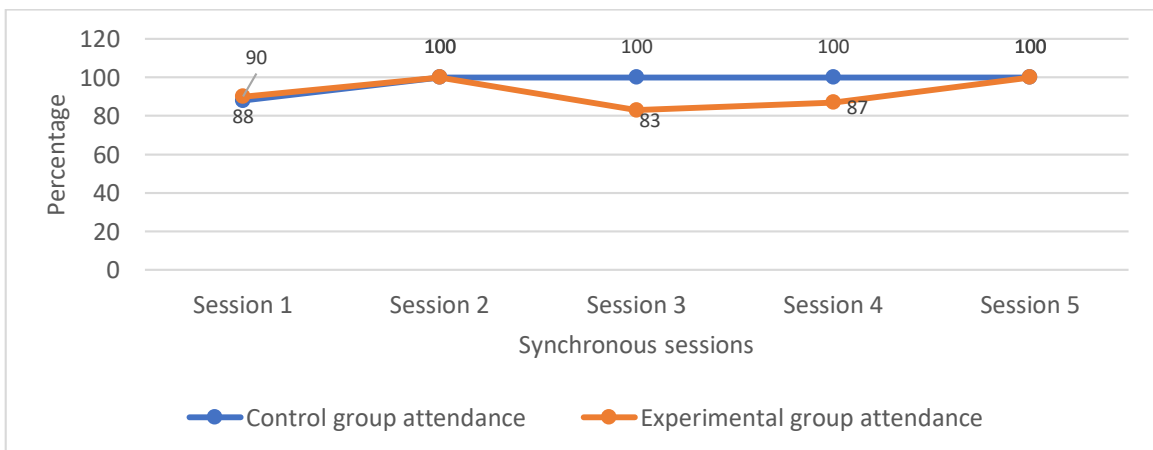
This study sought to establish student participation during the synchronous sessions; thus, the participation reports were downloaded from the Nearpod website. Figure 5.4 presents student participation in the experimental group as part of the analytics generated by Nearpod.

Figure 5. 4

Percentage of student participation on Nearpod
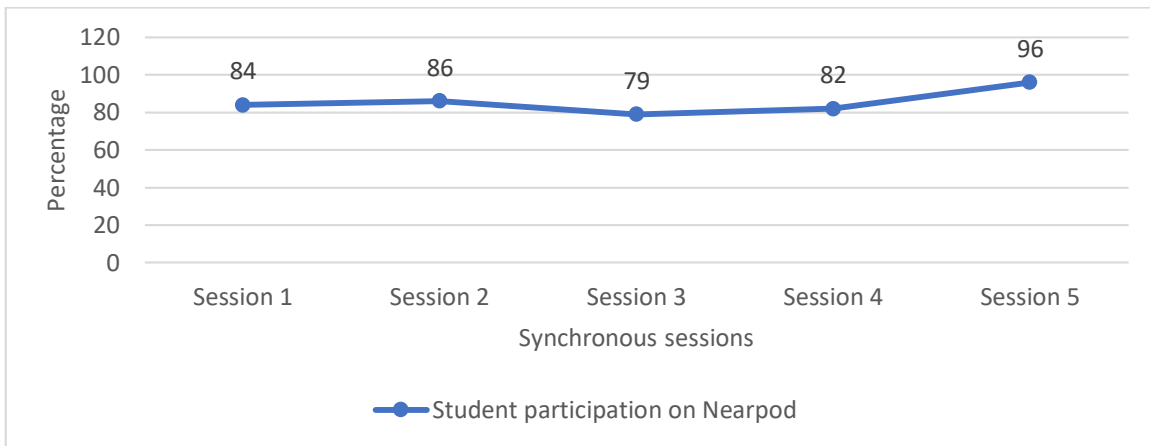
Similarly, provided that one of the specific objectives entailed comparisons between the pre-test and post-test scores, only the results of the 21 students who participated in all the synchronous sessions are included below. (Figure 5.5)

Figure 5. 5

Pre-test and post-test results of students who attended all synchronous sessions
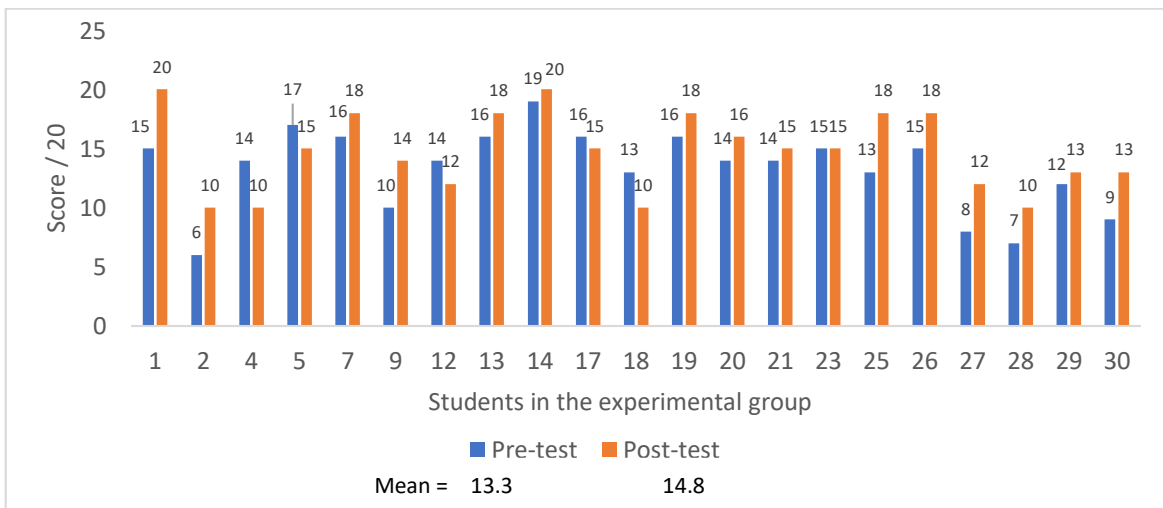
In the results of students whose pre-tests scores were below the experimental group mean (M=12.87), the scores of six students stand out: participants 2, 9, 27, 28, 29, and 30. The post-test results for those participants suggest that the use of Nearpod during the synchronous sessions improved their grammatical competence (see Table 5.10 and Figure 5.6).

Table 5. 10

Progress of students whose pre-test scores were below the average

	Pre-test	Post-test
Mean	8.67	12
Standard Deviation	2.16	1.67

Figure 5. 6

Progress of students whose pre-test scores were below the mean
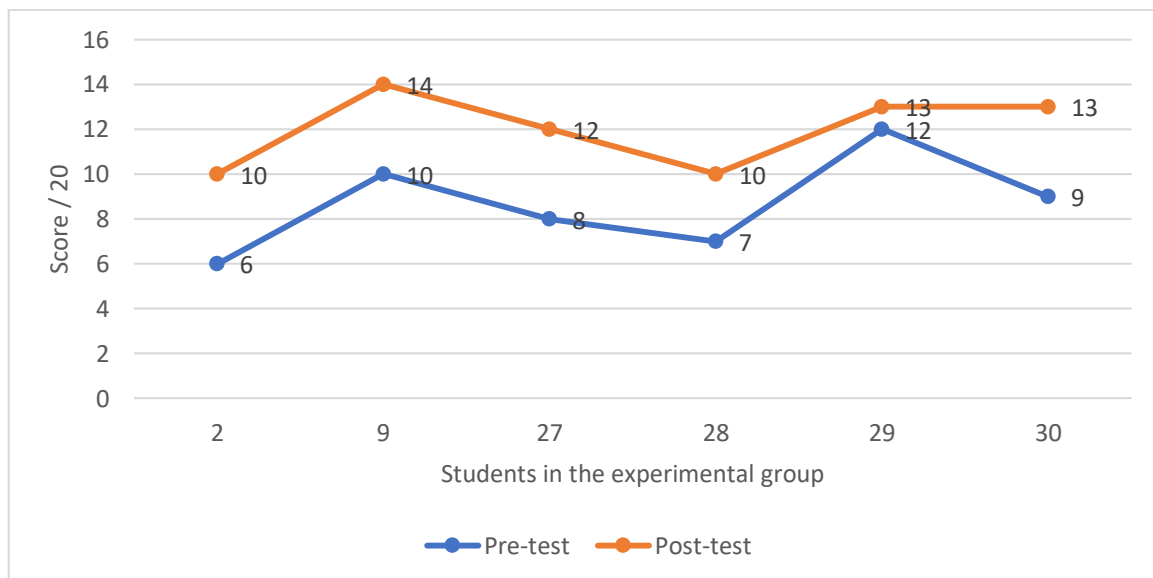
A similar pattern was identified when analyzing the results of participants who had pre-test results below the median (median = 13.5), a measure of central tendency that is located in the midpoint of the distribution after arraying the scores in rank order (Creswell, 2012). As the median is not easily affected by extreme scores, it is a representative value of the distribution (Gravetter & Wallnau, 2010). There are 8 participants who attended all synchronous sessions and whose scores fall under the median: participants 2, 9, 18, 25, 27, 28, 29, and 30. The data of this subcategory are presented in Table 5.11 and Figure 5.7

Table 5. 11

Progress of students whose pre-test scores were below the median

	Pre-test	Post-test
Mean	9.75	12.50
Standard Deviation	2.71	2.73

Figure 5. 7

Progress of students whose pre-test scores were below the median
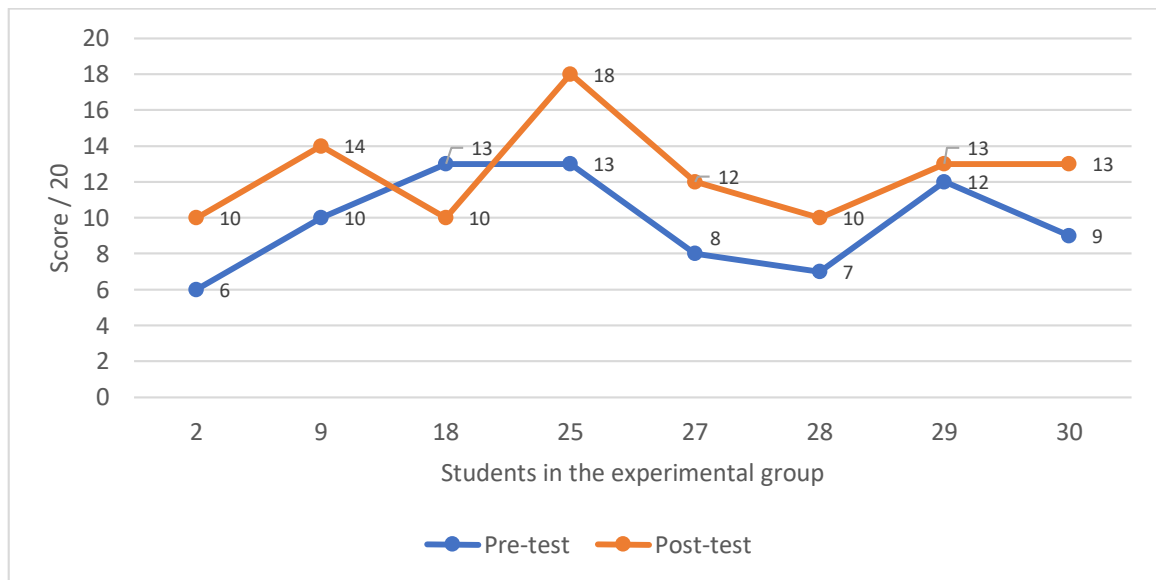
5.1.3 Results analysis

The teacher-researcher used two types of t-tests to analyze the results: for independent samples, and a paired two sample for means. Since this study aimed to determine the effect of synchronous formative assessments facilitated by Nearpod on learners' grammatical competence, the analysis considers the scores of participants who attended all the synchronous sessions: (n=14) in the control group, and (n=21) in the experimental group. The Box-and-whisker plots in Figure 5.8 present the data, and Table 5.12 includes the results of the t-test for independent samples assuming unequal variances.

Figure 5. 8

Comparisons of the pre-test and post-test scores between groups
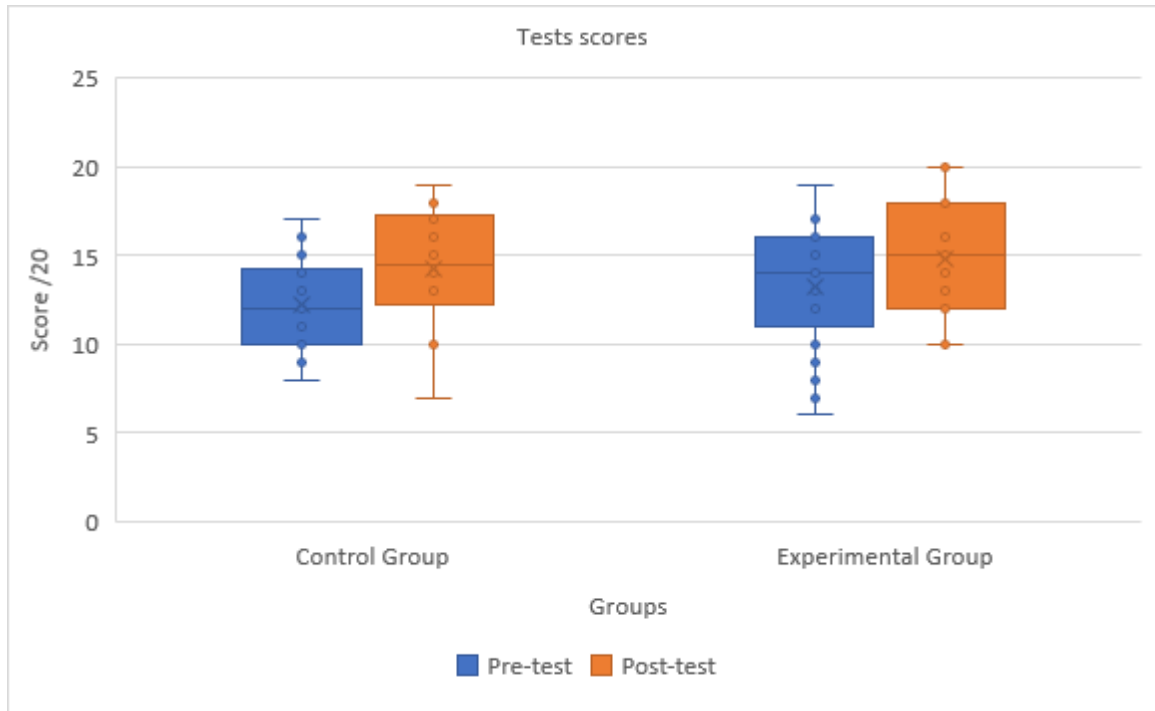
Table 5. 12

Results of the independent t-test assuming unequal variances

	Post-test	
	Control group	Experimental group
Mean	14.21	14.76
Variance	12.18	11.09
degrees of freedom	27	27
t Stat	-0.463	
P(T<=t) two-tail	0.647	
t Critical two-tail	2.052	

The teacher-researcher performed paired t-tests for means with the scores of participants who performed below average (n=6), and below the median (n=8) in the pre-test to identify differences after the intervention. Figure 5.9 provides a graphic representation of that data through a Box-and-whisker plot, and Table 5.13 and Table 5.14 include the results of the paired t-test for both sub-categories.

Figure 5. 9

Progress of students who scored below the mean and the median in the experimental group

Table 5. 13

Results of the paired t-test – scores below the mean

	Pre-test	Post-test
Mean	8.67	12
Variance	4.67	2.8
degrees of freedom	5	
Pearson Correlation	0.83	
t Stat	-6.74	
P(T<=t) two-tail	0.001	
t Critical two-tail	2.571	

Table 5. 14

Results of the paired t-test – scores below the median

	Pre-test	Post-test
Mean	9.75	12.5
Variance	7.36	7.43
degrees of freedom	7	
Pearson Correlation	0.54	
t Stat	-2.99	
P(T<=t) two-tail	0.020	
t Critical two-tail	2.364	

5.1.4 Hypothesis testing

The null hypothesis stated that there are no differences in students' scores for grammatical competence resulting from the use of formative assessments facilitated by Nearpod. After comparing the post-test scores, the teacher-researcher found that students in the experimental group (M = 14.93, SD = 3.02) performed slightly better than the control group (M = 14.56, SD = 3.39). To further analyze the results, the scores of students who attended all synchronous sessions during the intervention were used to perform a t-test for independent samples on Microsoft Excel (see Table 5.12). With the alpha level α=0,005, the results do not account for a statistically significant difference between groups t(27) = 0.463, p= 0.647.

Subsequent analyses of data through paired-samples t-tests were used to determine the progress of participants under two sub-categories: pre-test scores below the mean, and pre-test scores below the median. For participants who scored below the mean in the pre-test (n=6) in the experimental group (see Table 5.13), there was a significant difference in the scores for the pre-test (M=8.67, SD=2.16) and post-test (M=12, SD=1.67); t(5)=6.74, p=0.001.

Similarly, the analysis of the second subcategory (see Table 5.14), which included participants who scored below the median in the pre-test (n=8), showed a statistically significant difference in the scores for the pre-test (M=9.75, SD=2.71) and post-test (M=12.50, SD=2.73); t(7)=2.99 , p=0.020.

The previous analyses for both sub-categories showed a statistically significant increase in participants' scores after the use of Nearpod to conduct synchronous formative assessments. In both cases, the p-value was less than 0.05, which imply that there was a significant improvement in grammatical competence of less skilled students.

5.1.5 Questionnaire results

At the end of the intervention, participants in the experimental group (n=30) completed the Learner acceptance survey adapted from Rofiah and Waluyo (2020). The questionnaire included two subscales, perceived usefulness, and perceived ease of use with 5 statements each (Appendix I). The questionnaire was translated into Spanish, and participants responded online. Figure 5.10 contains the compiled responses.

Figure 5. 10

Results of the Learner acceptance survey about Nearpod
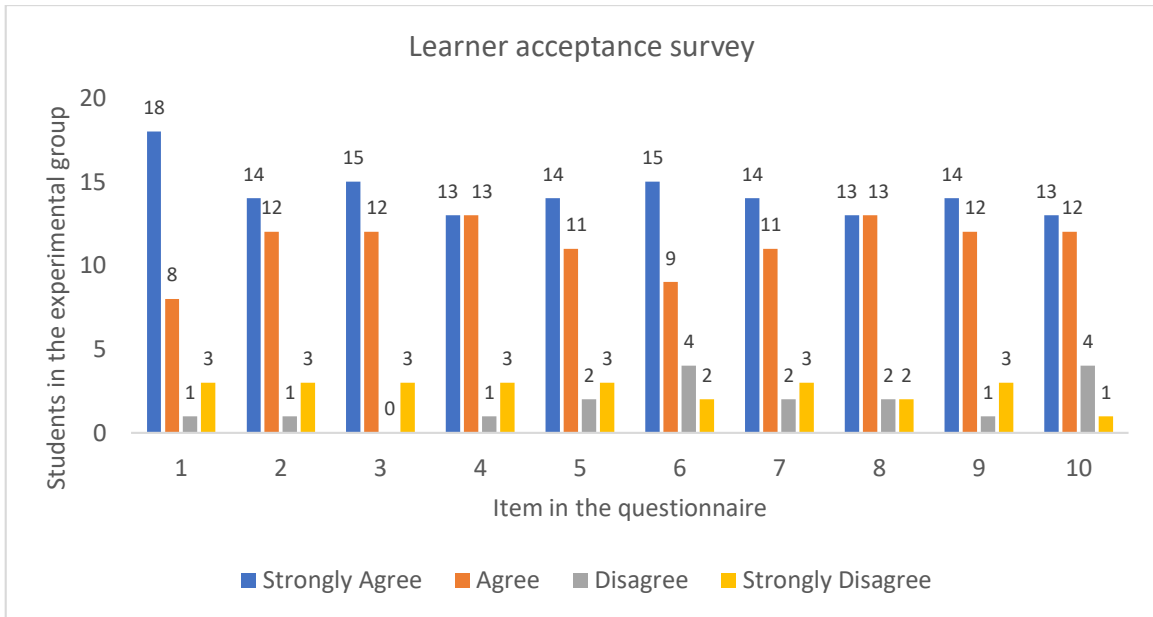
The following section presents the results for each item in the questionnaire. The percentages included in the figures are calculated over a total of 30 participants in the experimental group (n=30). Items 1-5 are part of the category perceived usefulness, and items 6-10 are related to the category perceived ease of use.

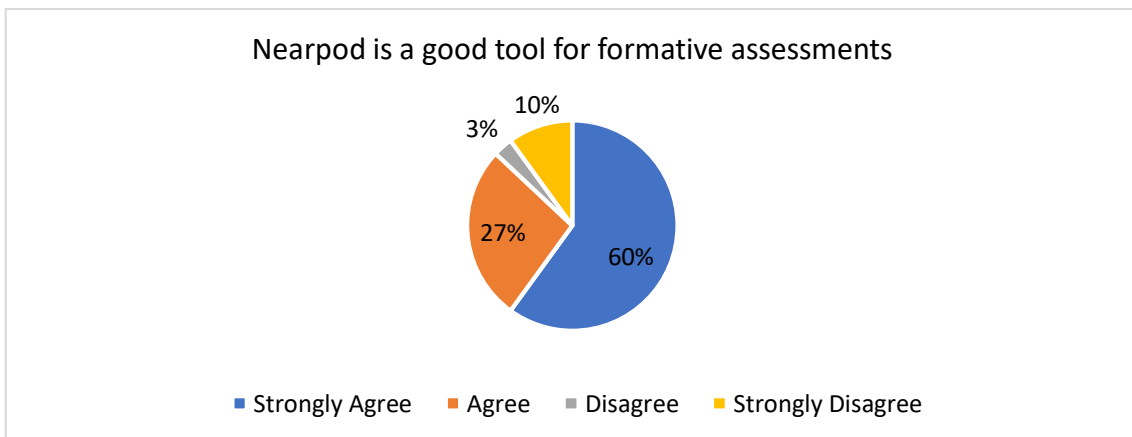Item 1: Nearpod is a good tool for formative assessments.

Figure 5. 11

Item 1 results – Learner acceptance survey

Figure 5.11 represents the percentage of participants who perceived Nearpod as a good tool for formative assessments, where 60% of participants strongly agreed with this statement, and 27% agreed. In general terms, most participants deemed Nearpod as a good tool.

Item 2: Nearpod is effective for formative assessments.

Figure 5. 12

Item 2 results – Learner acceptance survey

Nearpod is effective for formative assessments

10%
3%
47%
40%

■ Strongly Agree   ■ Agree   ■ Disagree   ■ Strongly Disagree
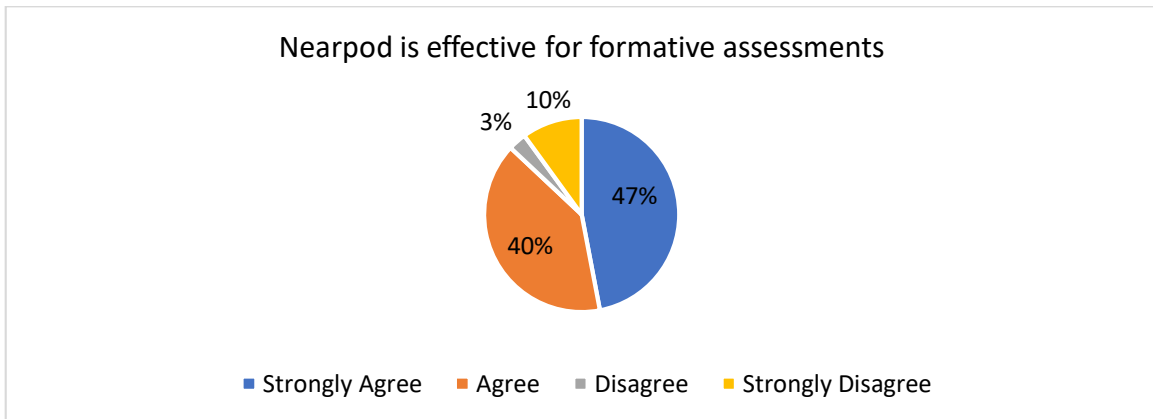
The attitudes of participants who believed that Nearpod is effective to conduct formative assessments are depicted in this pie chart. It is possible to observe that 47% of participants chose the option strongly agree, and 40% the option agree.

Item 3: Nearpod is useful to participate during the synchronous sessions.

Figure 5. 13

Item 3 results – Learner acceptance survey

Nearpod is useful to participate during the synchronous sessions

0%   10%
50%
40%

■ Strongly Agree   ■ Agree   ■ Disagree   ■ Strongly Disagree
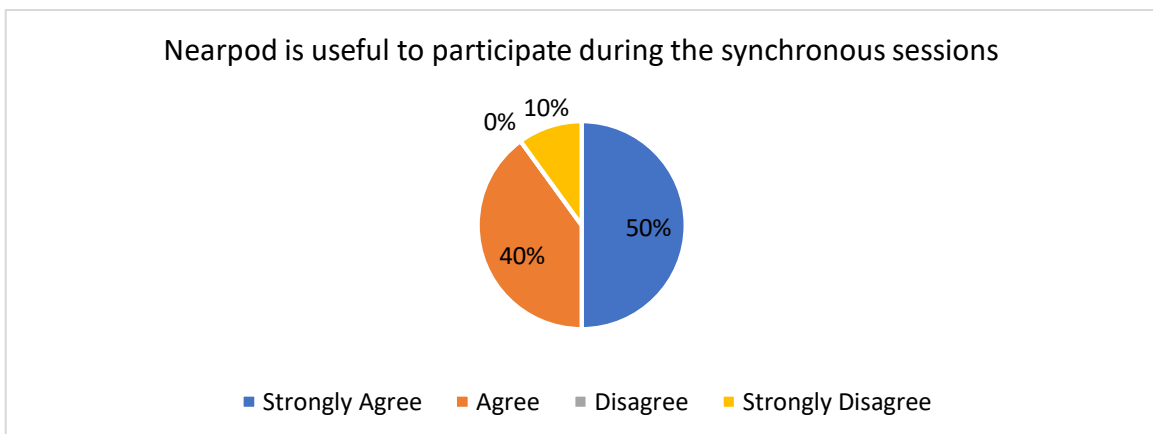
Figure 5.13 illustrates the percentage of students who regarded Nearpod as useful to participate during the synchronous sessions. Concerning this item, 50% strongly agreed and 40% agreed.

Item 4: Nearpod enhances my experience in online classes.

Figure 5. 14

Item 4 results – Learner acceptance survey
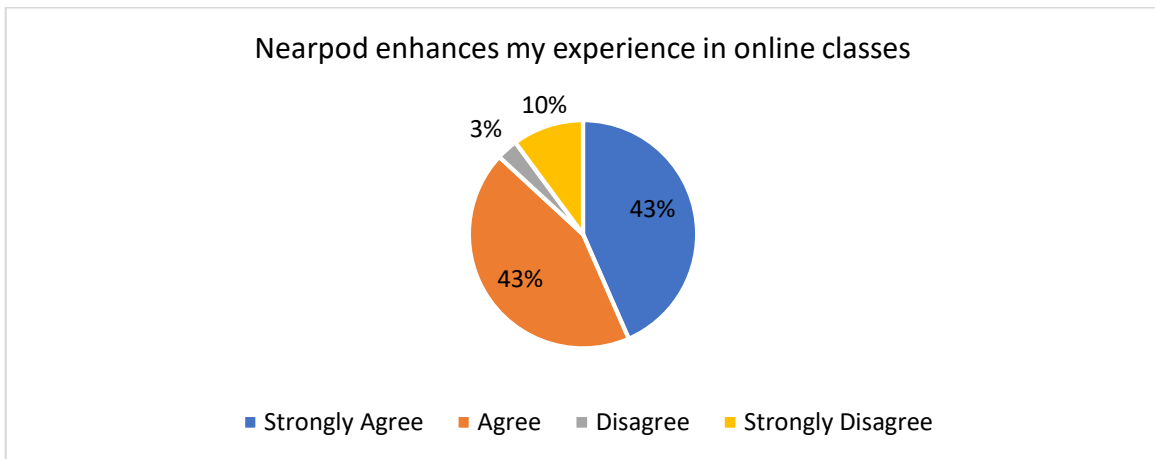
This figure highlights the percentage of participants who maintained that Nearpod enhanced their learning experience in online classes. It can be seen that participants equally chose the options strongly agree and agree, with 43% each.

Item 5: Nearpod should be used in all synchronous sessions.

Figure 5. 15

Item 5 results – Learner acceptance survey
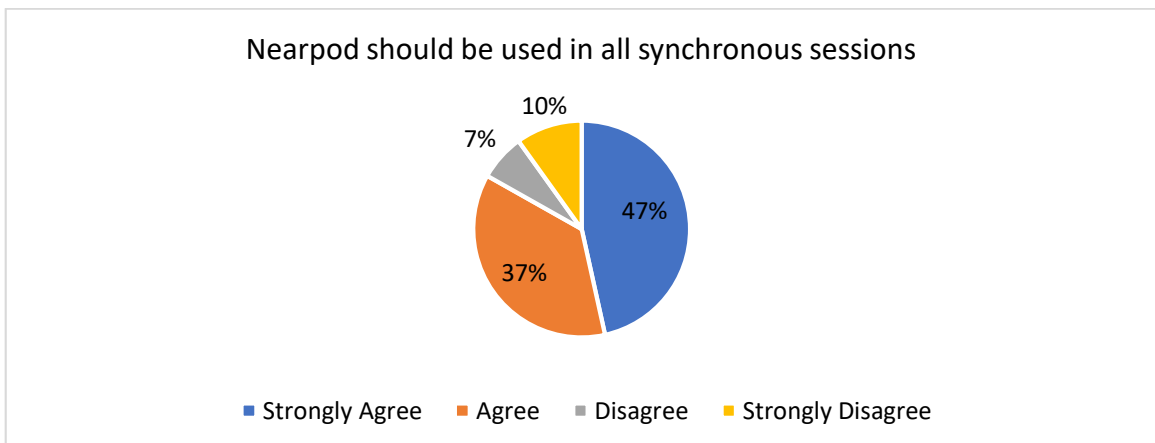
Figure 5.15 presents the results of participants who suggested using Nearpod in all synchronous sessions. According to this information, 47% strongly agreed and 37% agreed with this statement.

Item 6: Nearpod is easy to use.

Figure 5. 16

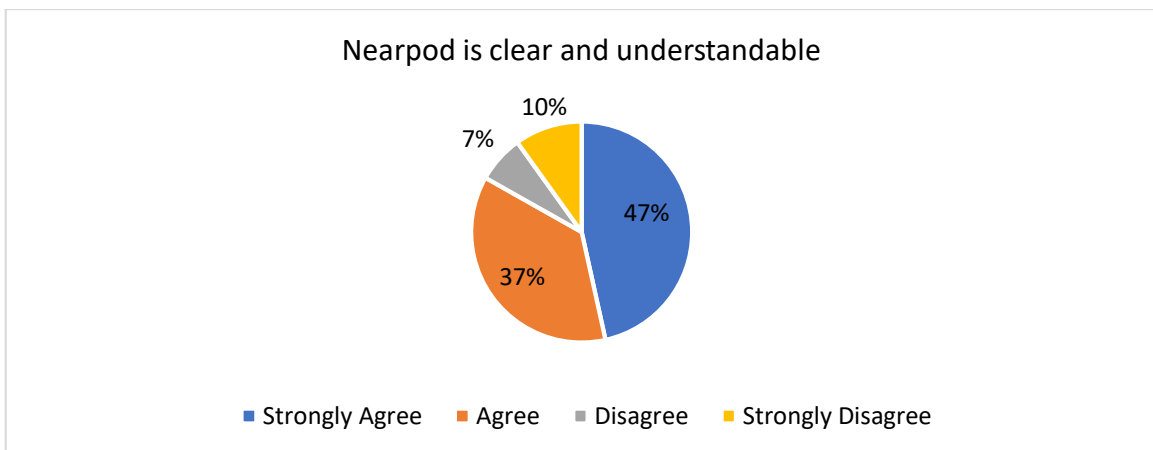*Item 6 results – Learner acceptance survey*
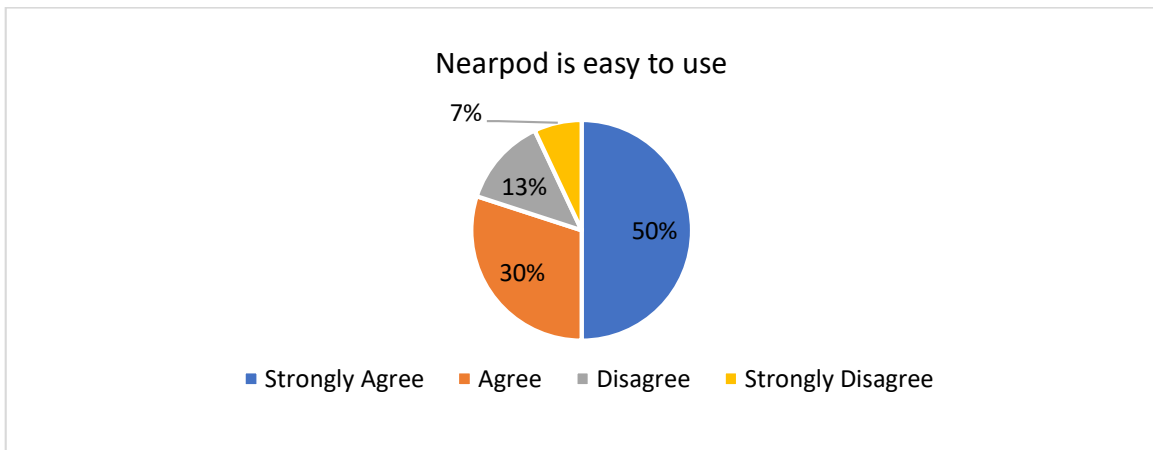
The attitudes of participants about Nearpod being easy to use are represented in this pie chart. It is observed that 50% of participants selected the option strongly agree and 30% the option agree.

Item 7: Nearpod is clear and understandable.

Figure 5. 17

Item 7 results – Learner acceptance survey

This figure includes the answers of participants regarding the item about Nearpod being clear and understandable. The results show that 47% strongly agreed and 37% agreed with this statement.

Item 8: Nearpod is flexible to interact with.

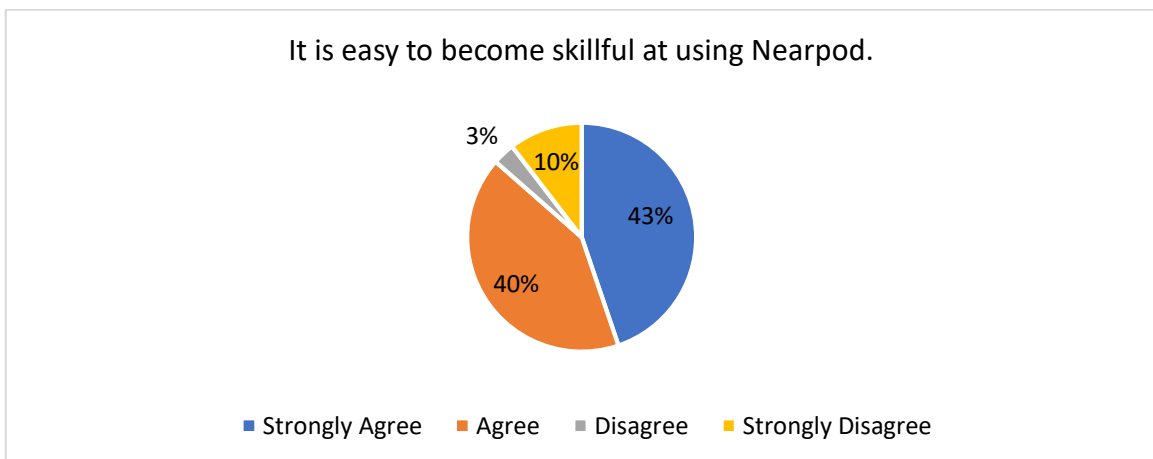**Figure 5. 18**

Item 8 results – Learner acceptance survey
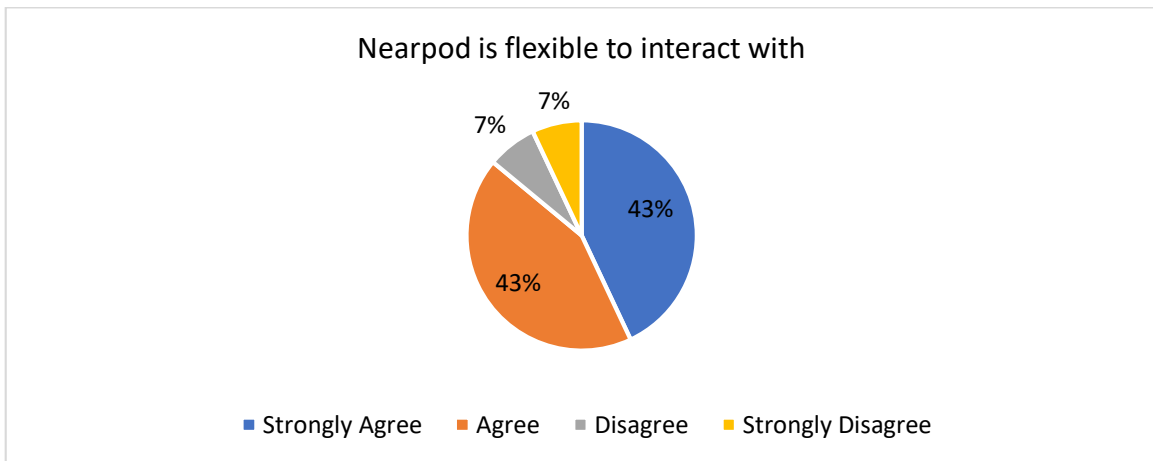
The attitudes of participants about Nearpod being flexible to interact with are depicted in this figure. The results reveal that 43% selected the option strongly agree and 43% agree.

Item 9: It is easy to become skillful at using Nearpod.

Figure 5. 19

Item 9 results – Learner acceptance survey

This figure includes the answers for the item which stated that it is easy to become skillful at using Nearpod. The results show that 43% of participants strongly agreed and 40% agreed with this statement.

Item 10: Operating Nearpod is easy, either on the website or the application.

Figure 5. 20

Item 10 results – Learner acceptance survey

Operating Nearpod is easy, either on the website or the application.

- Strongly Agree
- Agree
- Disagree
- Strongly Disagree
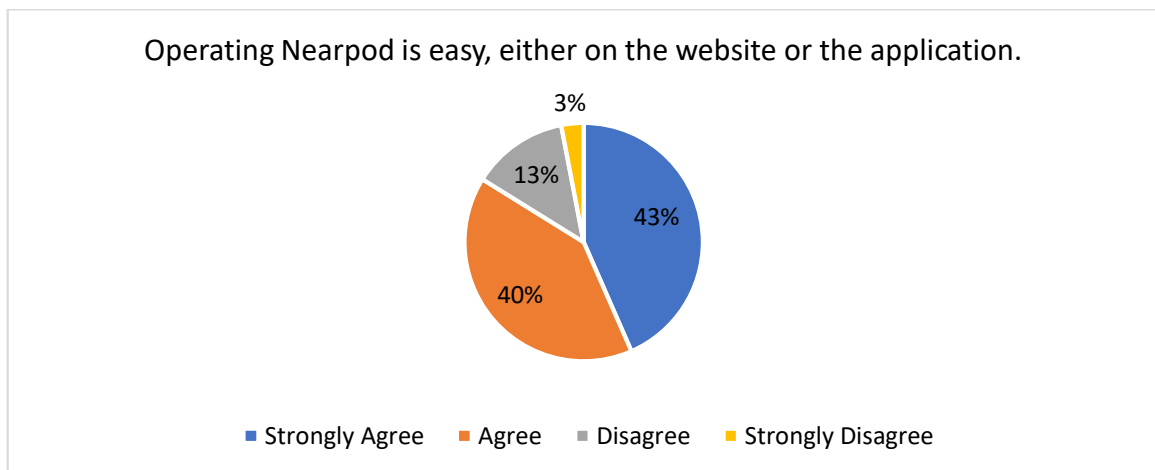
Finally, in this figure it is observed that 43% of participants chose the option strongly agree, and 40% the option agree in relation to the item stating that operating Nearpod on the website or application is easy.

CHAPTER 6: DISCUSSION

6.1 Introduction

This action research study reports on the experience of using Nearpod to conduct formative assessments in a university EFL class. Different research studies documenting the implementation of ICT tools to support language teaching have reported positive results under regular in-person instruction. Nonetheless, the teaching conditions derived from the Covid-19 pandemic urged institutions across different levels to shift from face-to-face to remote instruction. The perceived lack of engagement along with limited participation during the synchronous sessions encouraged the teacher-researcher to incorporate the app Nearpod over the course of a thematic unit. Nearpod was included in class to promote participation and provide students with a more active learning experience. Finally, the classroom innovation in this higher education institution was planned to assist students in their foreign language learning and compliance with the Ecuadorian regulation Reglamento de Régimen Académico, [Regulation of Academic Regime, translation mine] (2019) that requires undergraduate students to reach a B1 CEFR proficiency level.

6.2 Discussion of findings

This section analyses the data collected in the study concerning the research questions posed for this study.

6.2.1 Research question 1

Does the use of the app Nearpod in synchronous formative assessment influence learners' grammatical competence?

The data analysis shows a slight difference in the mean value of the pre-test and post-test scores between the experimental and control groups. However, an independent T-test analysis in Excel with the post-test scores of students who attended all the synchronous sessions showed a non-significant difference at $p < 0.05$ and the P= 0.647. Since the P value was greater than 0.05, the null hypothesis that stated that students' scores in grammatical competence would not improve after using formative assessments facilitated by Nearpod was not rejected.

6.2.2 Research question 2

Are there meaningful differences between learners' pre and post-test scores?

The results comparing the post-test scores of participants in the experimental and control groups demonstrated a small and not significant difference between the post-test

scores. Hence, based on these initial results the teacher-researcher decided to conduct paired-samples t-test to analyze the progress of students whose pre-test scores met the criteria of two sub-categories: scores below the mean, and scores below the median. The analysis for the data in the first sub-category retrieved a result of P=0.001 at p< 0.05. Likewise, the analysis of participants who had pre-test scores below the median indicated a value of P=0.020. Although the comparisons between the experimental and control groups do not account for a statistically significant improvement, the subsequent analysis suggested that less skilled participants did benefit from the intervention.

6.2.3 Research question 3

What are students' attitudes about the use of Nearpod as a formative assessment tool?

The results collected via the online questionnaire confirmed participants' acceptance of Nearpod to conduct formative assessments during synchronous sessions. The items related to the first subscale, perceived usefulness, indicated an overall positive acceptance of the tool. Similarly, based on students' experience with Nearpod in class, they rated the items linked to the category perceived ease of use as mostly positive, suggesting that the app did not cause them trouble.

CHAPTER 7: CONCLUSIONS

7.1 Summary of findings

The aim of this action research study was to implement the app Nearpod to conduct synchronous formative assessments and determine its effect on EFL university students' grammatical competence. Several studies reviewed in the available literature support the use of ICT tools in language education. Therefore, the teacher-researcher identified the need to explore pedagogical innovations when remote instruction was commonplace in university settings and ventured into using Nearpod in class to facilitate learning.

After comparing the data from participants in the experimental and control groups, the results showed a slight difference between pre-test and post-test scores, accounting for a modest increase. These results differed with the study by Cabrera et al., (2018) where participants in the experimental group significantly outperformed students in the control group resulting in greater learning of grammar and vocabulary after using the app Pixton. Moreover, the aforementioned results varied with the findings of a study by Boulaid and Moubtassime (2019) who reported a more robust vocabulary improvement in the experimental group attributed to the use of Kahoot during instruction.

Although not the primary focus of this study, a further analysis of the data of participants who performed below the mean and median in the pre-test revealed a more significant improvement at the end of the intervention. These preliminary results were inconclusive as only a small group of students who attended every synchronous session during the treatment improved their scores in grammatical competence that could be attributed to the use of Nearpod.

Regarding students' attitudes about the use of Nearpod, the questionnaire results demonstrated an overtly positive acceptance of the app. In the first subscale related to the perceived usefulness, most participants strongly agreed that Nearpod is a good tool for formative assessments and that the app is useful to participate during the synchronous sessions. Similarly, in the second subscale related to the perceived ease of use, half of participants believed that Nearpod is easy to use. These results mirrored the findings reported by Rofiah and Waluyo (2020) about Thai EFL learners' acceptance of Socrative as an ICT tool to implement formative assessments in vocabulary learning.

7.2 Limitations of the study

As this this action research study used a small convenient sample in the experimental and control groups, the results cannot be generalized beyond the context and background of this population. Another limitation is associated with the duration of the intervention, which consisted of five synchronous sessions over a three-week period. Finally, provided that some students missed a few synchronous sessions, their results may fail to accurately reflect their learning over the unit.

7.3 Future directions and further areas of research

The limitations previously mentioned could be addressed in future research by using a larger population, with repeated measures of performance over a longer period, such as a term or semester. In addition, since the teaching context is constantly changing, which has been even more evident these past months due to the global Covid-19 pandemic, researchers should continue documenting the use of other ICT tools in different modalities of instruction such as face-to-face, online, or hybrid. Teacher-researchers could thoroughly analyze the results by classifying learners and perform cluster analyses, such as participants performing below the mean or the median. In that way, more detailed information to elucidate learners' progress could be reported as part of the findings.

Likewise, researchers could conduct interviews with participants to collect more in-depth perceptions about their learning experience to enrich the data and report more conclusive findings. Finally, it would be worth exploring the use of ICTs from the teachers' perspective to gain insights about their digital competences and characterize the elements they consider important before implementing certain tools with pedagogical purposes.

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APPENDICES

Appendix A. Request to conduct the study

De mi especial consideración,

Como es de su conocimiento, actualmente estoy cursando el programa de **Maestría en enseñanza de inglés como lengua extranjera** en la **Escuela Superior Politécnica del Litoral (ESPOL).** El proceso de titulación requiere el desarrollo de la tesis durante el siguiente período académico por lo que comedidamente solicito su autorización para desarrollarla con estudiantes del Centro de Idiomas durante el IS-2021. El tema del estudio se titula *"The use of Nearpod to conduct formative assessment and its effect on CEFR A2 learners' grammatical competence in an Ecuadorian public university: an action research study"*, el cual ya fue aprobado por el Comité Académico de Posgrados.

Adicionalmente, acudo a usted como autoridad responsable del Centro de Idiomas para solicitar la asignación de dos paralelos de Nivel 4 cuyos estudiantes serán invitados a participar del presente estudio por un período de 3 semanas mientras dura la intervención. En caso de existir alguna inquietud, puede contactarme al correo hconza@espol.edu.ec

Finalmente, si usted autoriza la presente petición, solicito enviar una carta de permiso con el membrete de su institución reconociendo su consentimiento y permiso para poder conducir este estudio en su institución.

En espera de su favorable atención a la presente, le expreso mi sentimiento de consideración y alta estima.

Atentamente,

Hover Ismael Conza Armijos
Cédula: 1104809155

Appendix B. Activities on Nearpod

Figure B1

Matching activity

Figure B2

Polling activity

Figure B3

Quiz activity

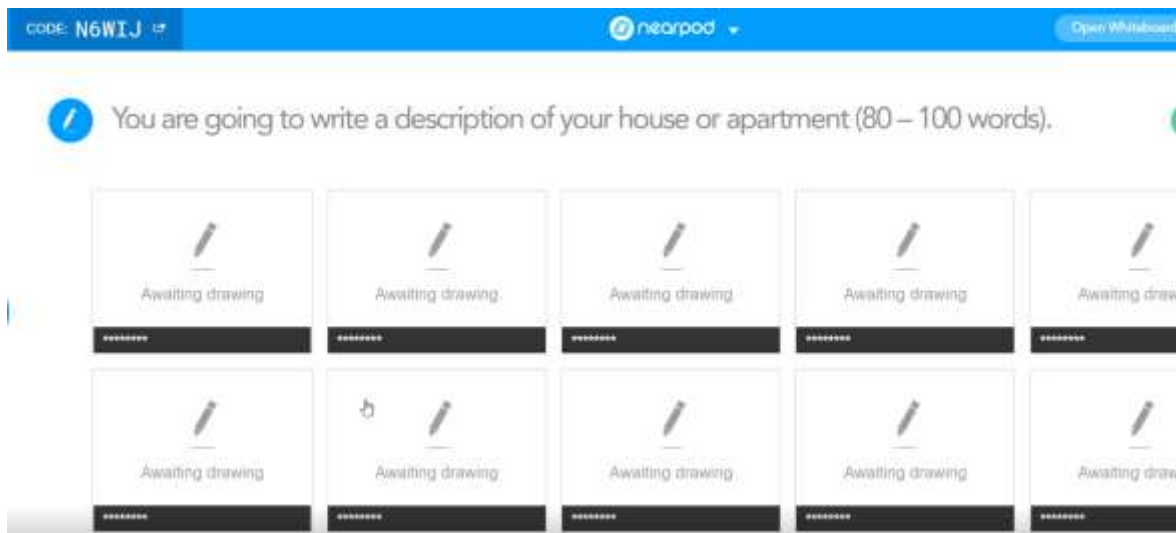**Figure B4**

Fill-in-the-blanks activity

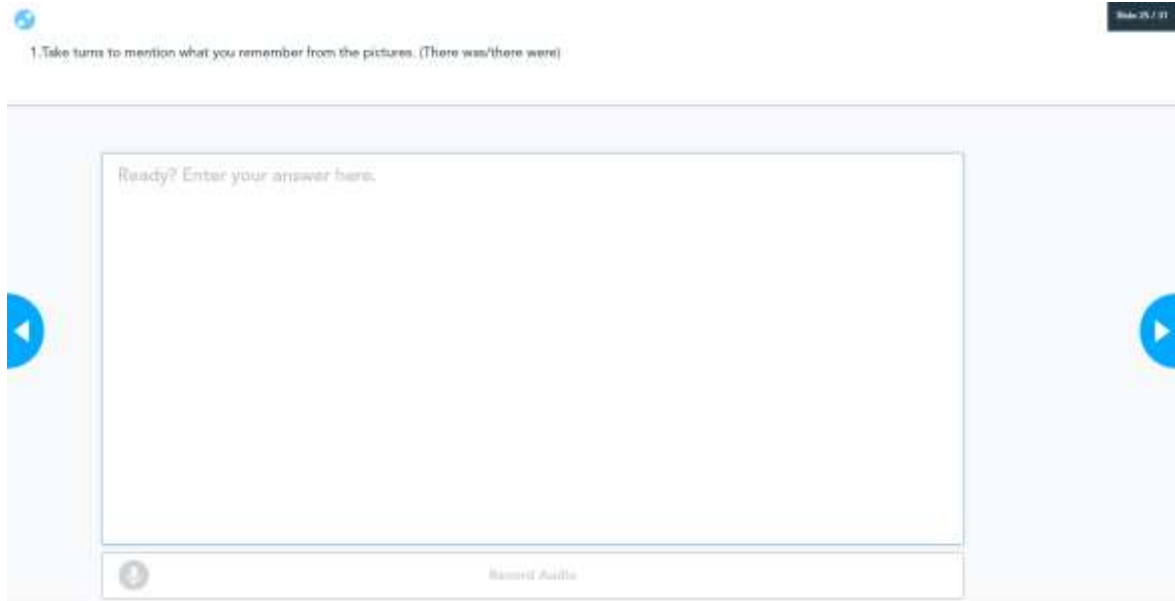**Figure B5**

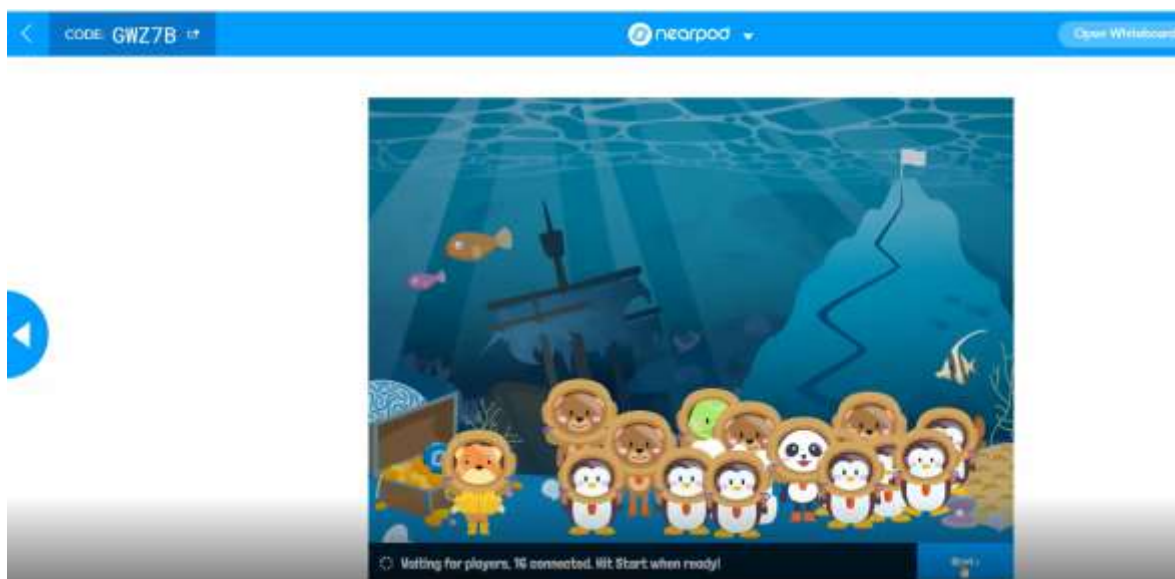*Collaborate board activity*

Figure B6

Draw it activity

Figure B7

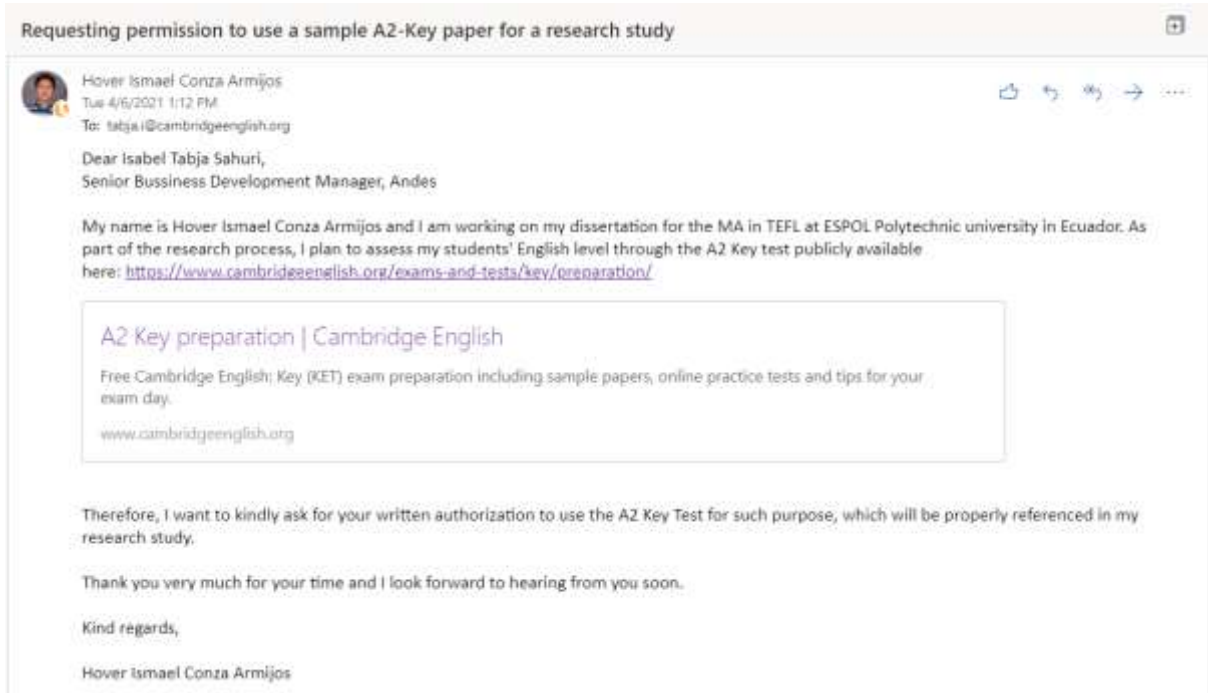*Open-ended questions with audio/text activity*

Figure B8

Time to climb activity
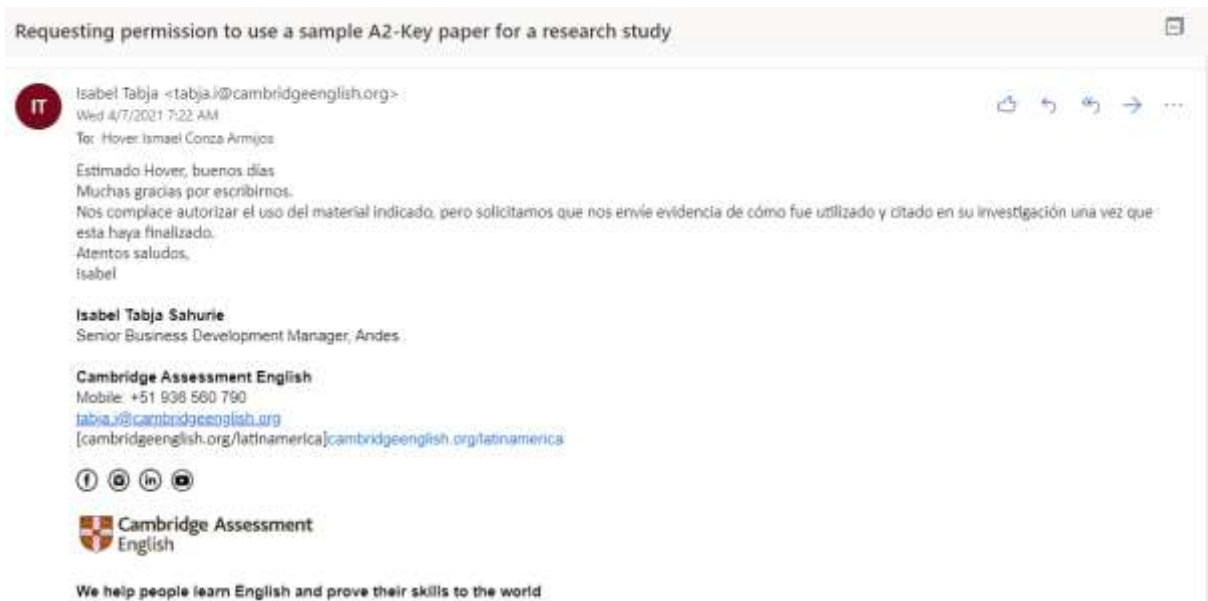
Appendix C. Permission to use the A2 Key test

Figure C1

Request to use the A2 Key test

Requesting permission to use a sample A2-Key paper for a research study

Hover Ismael Conza Armijos
Tue 4/6/2021 1:12 PM
To: tabja.i@cambridgeenglish.org

Dear Isabel Tabja Sahuri,
Senior Bussiness Development Manager, Andes

My name is Hover Ismael Conza Armijos and I am working on my dissertation for the MA in TEFL at ESPOL Polytechnic university in Ecuador. As part of the research process, I plan to assess my students' English level through the A2 Key test publicly available here: https://www.cambridgeenglish.org/exams-and-tests/key/preparation/

A2 Key preparation | Cambridge English

Free Cambridge English: Key (KET) exam preparation including sample papers, online practice tests and tips for your exam day.

www.cambridgeenglish.org

Therefore, I want to kindly ask for your written authorization to use the A2 Key Test for such purpose, which will be properly referenced in my research study.

Thank you very much for your time and I look forward to hearing from you soon.

Kind regards,

Hover Ismael Conza Armijos

Figure C2

Response to the formal request

Requesting permission to use a sample A2-Key paper for a research study

Isabel Tabja <tabja.i@cambridgeenglish.org>
Wed 4/7/2021 7:22 AM
To: Hover Ismael Conza Armijos

Estimado Hover, buenos días
Muchas gracias por escribirnos.
Nos complace autorizar el uso del material indicado, pero solicitamos que nos envíe evidencia de cómo fue utilizado y citado en su investigación una vez que esta haya finalizado.
Atentos saludos,
Isabel

Isabel Tabja Sahurie
Senior Business Development Manager, Andes

Cambridge Assessment English
Mobile: +51 936 560 790
tabja.i@cambridgeenglish.org
[cambridgeenglish.org/latinamerica]cambridgeenglish.org/latinamerica

Cambridge Assessment
English

We help people learn English and prove their skills to the world

Appendix D. Review of the pre-test and post-tests

Figure D1

Email sent to colleagues

Thank you very much for your help. As you know, I'm currently working on my dissertation, and one of the instruments I will use to collect data is a grammar test. The Pre and Post tests attached to this email were created using the questions from the Unit 8 Test and Quick File 8 from the American English File 1B textbook series.
I would like to kindly ask you to go over the tests and check if both of them are identical in terms of the design, number of questions, and types of questions. Feel free to make any additional comments you deem necessary about the tests.

Once again, I highly appreciate your collaboration in this matter.

All the best,

Hover Conza

Figure D2

Response from colleague 1

Parameter	Comments/Observations
Design	Both the Pre and Post-Test have the same design in their four sections. *Part 3 has the answers instead of the tests options. Do not forget to scramble words.*
Number of questions	Both exams have the same number of questions
Types of questions	Both exams have the same type of questions
Content	Both exams evaluate the same grammar topics; however, the post-test evaluates *some* and *any* (question 6) which is not evident in the pre-test. I would recommend to add one questions concerning to *some* and *any* in the pre-test so that the exam can have the same balance. From experience, *some* and *any* needs to have special attention even though they are taught with *there is* and *there are*.
Marks	I recommend you include the scores in each part so that your students can be engaged with the tests or you can just tabulate the results easily.
Reliability	Both exams are consistent they will give you similar results.
Validity	It is evident that learning goals are known by the teacher before teaching grammar topics.

Figure D3

Response from colleague 2

Dear Hover,

After going through your pre and post tests, I could observe that the design, number of questions and type of questions are identical. I also corroborated that the questions uses in both are from Unit 8 Test and Quick File 8 from the American English File 1B textbook series.
Good luck on your research paper!

Get Outlook for Android

Appendix E. Permission to use and adapt an instrument

Requesting permission to use an instrument from your study

Hover Ismael Conza Armijos
Tue 6/8/2021 12:12 AM
To: budi.business.waluyo@gmail.com

Dear Budi Waluyo,

I hope this email finds you well. My name is **Hover Ismael Conza Armijos** and I am working on my dissertation for the MA in TEFL at ESPOL Polytechnic university in Ecuador. The title of my proposal is *"The use of Nearpod to conduct formative assessment and its effect on CEFR A2 learners' grammatical competence in an Ecuadorian public university: an action research study"*.

I would like to kindly ask for your written authorization to adapt and use the Learner acceptance survey from your study entitled "Using Socrative for Vocabulary Tests: Thai EFL Learner Acceptance and Perceived Risk of Cheating". Rest assured that your work will be properly referenced in my research.

Thank you very much for your time and I look forward to hearing from you soon.

Kind regards,

Hover Ismael Conza Armijos

Budi Waluyo <budi.business.waluyo@gmail.com>
Tue 6/8/2021 5:36 PM
To: Hover Ismael Conza Armijos

Dear Hover Ismael Conza Armijos,

Thank you for contacting me for this request.

On behalf of the authors of the published paper entitled "Using Socrative for Vocabulary Tests: Thai EFL Learner Acceptance and Perceived Risk of Cheating", I hereby give the permission to you to adapt and use the survey questionnaire in your research.

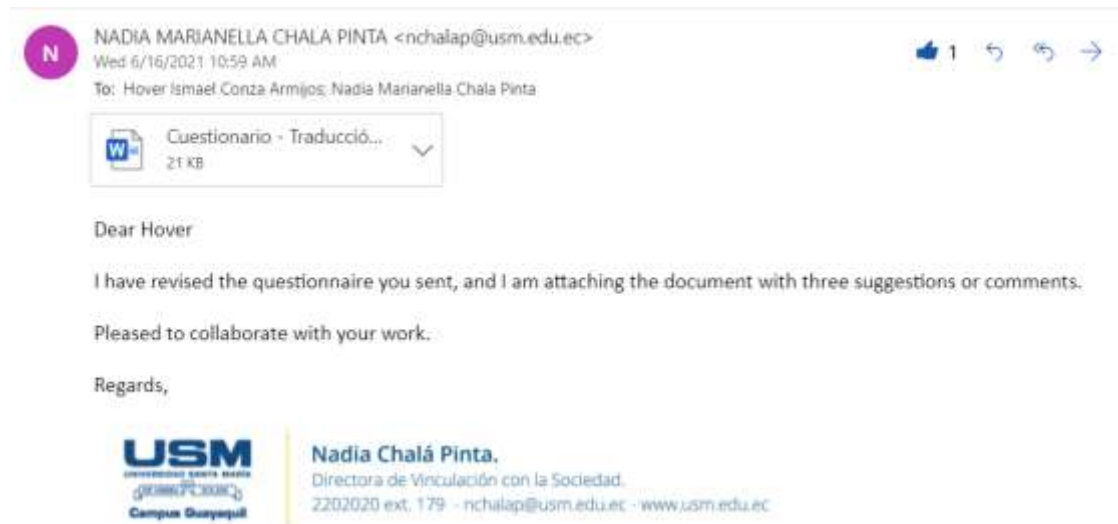Best regards,
Budi Waluyo

Appendix F. Revision of translation

Figure F1

Email sent to a bilingual colleague
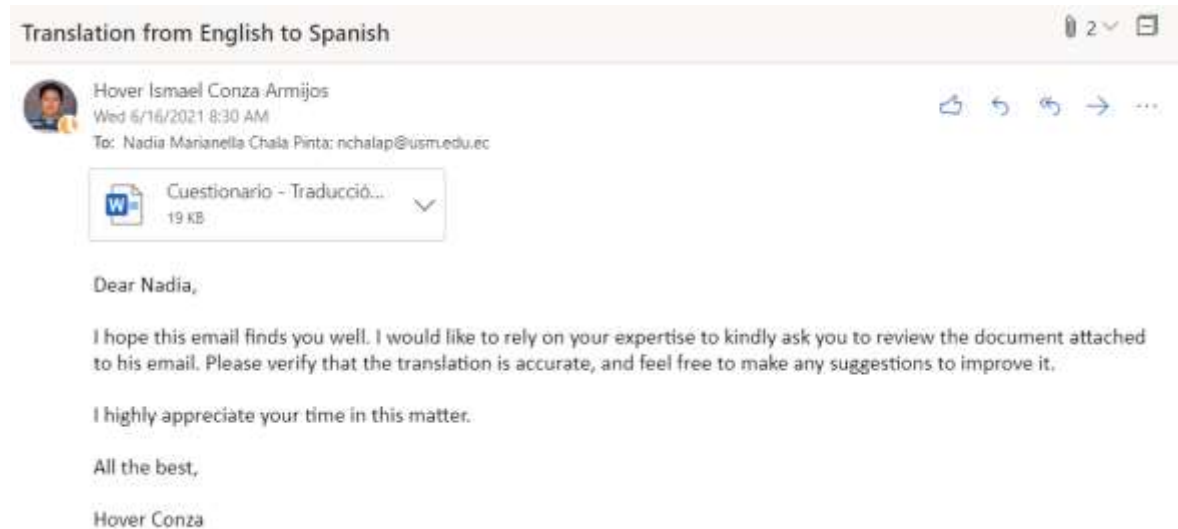
Figure F2

Response from the EFL expert

Appendix G. Informed consent in Spanish

Formulario de consentimiento informado de investigación

Tema de investigación: El uso de Nearpod como herramienta de evaluación formativa y su efecto en la competencia gramatical de estudiantes de nivel de inglés A2 según el CEFR en una universidad pública ecuatoriana: un estudio de investigación-acción.

Información General

Usted está invitado a participar en un estudio de investigación conducido por Hover Ismael Conza Armijos, estudiante de la Maestría en Enseñanza de Inglés como Lengua Extranjera de la Escuela Superior Politécnica del Litoral (ESPOL). La presente investigación es parte del trabajo de titulación bajo la supervisión de la docente PhD. Katherine Salvador Cisneros. Este proyecto tiene la aprobación del Departamento de Postgrados de la ESPOL y de la Dirección del Centro de Idiomas de la universidad

Propósito del Estudio

Determinar el efecto de la evaluación formativa a través de Nearpod en la competencia gramatical de los estudiantes.

Procedimiento

Si acepta participar en el estudio, se le pedirá realizar los siguiente:

1. Participar en las clases sincrónicas en el horario regular.

2. Rendir dos tests, el resultado obtenido en los tests no afectará su calificación en esta asignatura.

3. Contestar una encuesta al término de la unidad.

4. Autorizar el uso de los resultados obtenidos para su respectivo análisis y discusión.

Beneficios para los participantes

Los beneficios del estudio están relacionados con proveer actividades de práctica en las sesiones sincrónicas de la materia de inglés. Su participación en el estudio no involucra créditos adicionales, puntos extras o pago. Su participación será voluntaria, y brindará información para ayudar a su docente a mejorar en su práctica profesional.

Riesgos potenciales e incomodidad

No hay peligros físicos o psicológicos asociados con el estudio. Únicamente el tiempo dedicado a completar los tests y la encuesta. Si las incomodidades se convierten en un problema, puede descontinuar su participación.

Confidencialidad

Su identidad o cualquier información personal se mantendrá anónima y no será revelada a nadie fuera del estudio. La información obtenida en este estudio podría ser usada en publicaciones sin embargo se mantendrá absoluta confidencialidad y no se incluirá datos que lo identifiquen individualmente.

Participación voluntaria

La participación en este estudio es voluntaria y como participante, usted podrá salir del estudio en cualquier momento sin consecuencias de ningún tipo.

Acepto participar en este estudio:

Si:

No:

Si su respuesta es afirmativa, continúe con la siguiente sección.

Datos Personales

Nombres y Apellidos:

Edad:

Carrera Universitaria:

Gracias por su participación

Appendix H. Assessment of Writing scale for A2 Key

Assessment of Writing scale

Band	Content	Organisation	Language
5	All content is relevant to the task. Target reader is fully informed.	Text is connected and coherent, using basic linking words and a limited number of cohesive devices.	Uses everyday vocabulary generally appropriately, while occasionally overusing certain lexis. Uses simple grammatical forms with a good degree of control. While errors are noticeable, meaning can still be determined.
4	*Performance shares features of Bands 3 and 5.*		
3	Minor irrelevances and/or omissions may be present. Target reader is on the whole informed.	Text is connected using basic, high-frequency linking words.	Uses basic vocabulary reasonably appropriately. Uses simple grammatical forms with some degree of control. Errors may impede meaning at times.
2	*Performance shares features of Bands 1 and 3.*		
1	Irrelevances and misinterpretation of task may be present. Target reader is minimally informed.	Production unlikely to be connected, though punctuation and simple connectors (i.e. 'and') may on occasion be used.	Produces basic vocabulary of isolated words and phrases. Produces few simple grammatical forms with only limited control.
0	Content is totally irrelevant. Target reader is not informed.	*Performance below Band 1.*	

Appendix I. Learner acceptance survey

Perceived usefulness

	4 Strongly agree	3 Agree	2 Disagree	1 Strongly disagree
1. Nearpod is a good tool for formative assessments.				
2. Nearpod is effective for formative assessments.				
3. Nearpod is useful to participate during the synchronous sessions.				
4. Nearpod enhances my experience in online classes.				
5. Nearpod should be used in all synchronous sessions.				

Perceived ease of use

	4 Strongly agree	3 Agree	2 Disagree	1 Strongly disagree
1. Nearpod is easy to use.				
2. Nearpod is clear and understandable.				
3. Nearpod is flexible to interact with.				
4. It is easy to become skillful at using Nearpod.				
5. Operating Nearpod is easy, either on the website or the application.				

Adapted from Rofiah and Waluyo (2020)

Appendix J. Nearpod lessons posted to the LMS