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University of Southampton

Faculty of Humanities

Modern Languages and Linguistics

**Effect of Asynchronous Online Interaction on Foreign Language Teacher Trainees'
Spoken Performance**

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by

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Abstract

Faculty of Humanities

Modern Languages and Linguistics

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With the integration of technology into the classrooms, the use of Computer Mediated Communication (CMC) gained ground quickly and with it, the study of Asynchronous Online Interactions has become popular in the field of education. Asynchronous Online Discussions (commonly referred to as AoD), are being used more frequently in higher education either as an online component or as an aid in face to face, blended or hybrid classes. AoDs in the form of text discussion forums have been widely researched in different teaching modalities, but the usage and effects of these forums through voice interaction is still incipient.

To contribute to the research up to date, this thesis intends to show, through cooperative action research in a blended learning environment, the effects that activities designed for voice discussion forums produce on the perception of the teaching and learning of spoken production as well as in spoken language itself and investigate any other feature that might be impacted by AoDs on Pre-service English Language Teachers in northern Mexico.

The methodology used is a mostly qualitative mixed method approach that includes focus groups, pre and post speaking tests, a cooperative action research through tasks designed cooperatively for voice discussion forums, written assessment of the designs, written reflections on the intervention and a final interview as research instruments. Results are compared to existing literature and findings shed light on the impact of voice discussion forum design in the field of foreign language teaching and learning. Data collection occurred over the fall semester of 2019 with thirty-seven pre-service teachers at an undergraduate English course in the field of teacher training in English Language Teaching.

Findings suggest that the design AoD in the form of voice discussion forums, also known as voice boards, are a tool that can prove to be very effective in improving aspects of spoken performance such as fluency, accuracy, vocabulary among others in accordance with literature on the topic but need to be designed correctly, otherwise its positive effects may not be present. Evidence from this study, not mentioned in previous studies, showed that pre-service teachers feel increased levels of motivation if they are included in the design of the discussion forums and that fosters a heightened reflection on their future as teachers. Results indicate that if the topics that pre-service teachers (in their role of learners) choose are used for performing teaching/learning tasks, they become more engaged and dedicate more time to completing the tasks. Finally, another element that emerged is that limiting the amount of people who can reply to participants in a forum fosters interaction of all the group.

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Research Thesis: Declaration of Authorship

Print name: Gabriel Francisco Leon Fontes

Title of thesis: Thesis for the degree of Doctor of Philosophy Effect of Asynchronous Online Interaction on Foreign Language Teacher Trainees' Spoken Performance

I declare that this thesis and the work presented in it are my own and has been generated by me as the result of my own original research.

I confirm that:

1. This work was done wholly or mainly while in candidature for a research degree at this University;
2. Where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated;
3. Where I have consulted the published work of others, this is always clearly attributed;
4. Where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work;
5. I have acknowledged all main sources of help;
6. Where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself;
7. None of this work has been published before submission

Signature:Date: December 6th, 2023

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Definitions and Abbreviations

- AoD.....Asynchronous Online Discussions. An asynchronous tool in Computer Mediated Communication used to establish interaction between two or more parties in a digital environment.
- AODB.....Asynchronous Online Discussion Boards. It is a synonym of AoD.
- CMC.....Computer Mediated Communication
- BL.....Blended Learning
- BA in ELT.....Bachelor of Arts in English Language Teaching
- CEFRCommon European Framework of Reference for Languages
- SLA.....Second Language Acquisition
- TOEFLThe Test of English as a Foreign Language is a standardized test to measure the English language ability of non-native speakers.
- IELTSThe International English Language Testing System, is an international standardized test of English language proficiency for non-native English language speakers.
- ESLEnglish as a Second Language
- FLTForeign Language Teaching
- FLLForeign Language Learning
- ERGO (Ethics and Research Governance Online) it is the University of Southampton’s institutional system for handling research ethics and governance applications where the studies involve human participants.

Chapter 1 Introduction

The purpose of this research study is to explore the effect that using asynchronous online interaction in the form of voice discussion forums both inside and outside the English Language Learning classroom, has on spoken production and on how it is taught and learned online. This study is conducted with a group of English Language pre-service teachers from northern Mexico taking part in a blended learning course of English as part of their regular curriculum in their university program.

This project takes an interactionist and sociocultural perspective to learning a language and uses Computer Mediated Communication (hereinafter CMC) in its asynchronous mode to explore it. It draws on research related to the Community of Inquiry model for CMC, and on the effect of spoken and written discussion forums on foreign language learning.

1.1 Research Context

This research takes place in Mexico which is a northern country in the American continent, with an estimated 126 million inhabitants in 2020 according to its national census, *INEGI*, (2020). Mexico borders on the north with the United States of America (USA) and is a federal republic with thirty-one states plus Mexico City as its capital. This study is located specifically in a Bachelor of Arts in English Language Teaching program (hereinafter BA in ELT), part of the educational offer of the foreign languages department in the Arts and Humanities faculty of a public university in the northern state of Sonora (hereinafter the University), which borders the State of Arizona, United States of America (USA) on the South.

The proximity between Mexico and the USA creates a strong expectancy by the state's society on the English proficiency of the future English Language teachers since knowing English is relatively common in the region. Additionally, there are some Americans who have come to live in Mexico and because of their proficiency in the language are given the opportunity to teach English.

Recent migratory changes in the USA have increased the number of return migrants who seek to integrate to Mexican society, including the state of Sonora. This is echoed by Mar-Molinero, (2018) as she states that studies "on the situation of returnees and their experiences of trying to integrate into Mexican society have increased recently." In this case, returnees are Mexican nationals who for different reasons "were taken by their parents to the United States of America in search of a better quality of life; then, returned to Mexico, with or without them, due to the antiimmigrant political and work conditions between 2007 and 2011".

Originally in Spanish [*fueron llevados por sus padres a Estados Unidos de América en la búsqueda de una mejor calidad de vida; luego, retornaron a México, con o sin ellos, debido a las condiciones políticas y laborales antinmigrantes de ese país entre 2007 y 2011*] (Cortez Román et al., 2017: 2).

The English proficiency of these returnees is usually more developed than those who have not lived in the United States of America (hereinafter USA) and find that becoming an English teacher is a good option for them due to their knowledge of the language. In order to become a teacher in Mexico, those interested can take two paths, one is to study in a state sponsored normal school, where they can be trained with a tendency more on focusing on state official curriculum and guidelines, or to study a bachelor's degree in either a public or private institution with a focus more on content rather than official curricula. Both normal schools and universities study official curricula and contents but with a tendency to favour one.

Learners in general, but specifically pre-service teachers, who attend the Bachelor of Arts in English Teaching at the University (hereinafter BA in ELT) come from different parts of the state and the country, with a few of them having lived previously in an English-speaking country such as the USA. In their study Cortez Román et al., (2017) were able to identify 131 students (77 females and 54 males) studying the BA in ELT at the research setting who were returnees. However, the majority of the students from such BA come from the same state of Sonora. Although there is an entry level exam to study the BA in ELT program, there are students whose level of spoken production needs to be developed because they come from a school background where English was either not available or not practiced sufficiently.

The capital of Sonora, Hermosillo, offers three Bachelor of Arts in English Language Teaching (BA in ELT) programs, the University's is one of them, which some returnees choose because they consider it will be easier for them to integrate to Sonoran society as English teachers. In their study Cortez Román et al., (2017) interviewed ninety-one return migrants who were studying or had studied the BA in ELT at the University and found that those who were returnees, struggled to adapt to Mexican universities because their mother tongue was not used in studies in the United States. The authors state that for returnees "Mexico represented the possibility of continuing their work and educational aspirations" [*México representaba la posibilidad de continuar con sus aspiraciones educativas y laborales.*] (Cortez Román et al., 2017. P. 4)

The BA program (see Appendix S) in the University, (2020) has five English courses throughout its curriculum, all aimed at helping the future teachers improve their proficiency and teaching abilities. In addition, most of the classes they take during their studies are imparted in English. Moreover, University regulations stipulate that these pre-service teachers have to study general

English, which is independent of their BA in ELT English courses, until they reach a minimum score of 550 points in an ITP TOEFL test or an equivalent advanced B2+ in terms of the Common European Framework of Reference for Languages (hereinafter CEFR). Unfortunately, this ITP test does not assess spoken production so sometimes it becomes difficult to be fully aware of their level of performance on this particular skill in all learners of the BA in ELT.

The university asks all students of their institution to take an English knowledge test before enrolment to any of its study programs; this test assesses their knowledge in reading, listening, and grammar. However, those learners who apply to study the Bachelor of Arts in English Teaching are administered an additional entry test where all English language skills are assessed (reading, writing, listening, and speaking), participants are accepted on the basis of the highest scores averaged with their academic record but these results are not necessarily shared with their professors.

This research study is developed in the fourth of the five English courses their BA in ELT offers; it is mostly a grammar based English course, but instructors are free to select the most appropriate strategies for their learners to achieve the course goals. The grammar studied in this course (see Appendix C) is explored more in depth than it is at the general course of English offered by the University since it is aimed for future English teachers. The original syllabus contemplates a face-to-face class and the modification conducted by the teacher/researcher from Face-to-Face sessions (hereinafter F2F) to Blended Learning occurred before the Covid-19 pandemic.

The foreign languages department which holds the BA in ELT referred, has a Self-Access Centre with computers and technological resources that can be used as tools by the future teachers to improve their language skills in different foreign languages not only English. All computers have access to Internet and if they do not know how to connect to or use a program, they can ask the person in charge who is there to assist them.

The above in addition to the learners' mobile phones, tablets, or their own computers. The term when the actual study took place, a building was being demolished to build a newer one and it coincided that the Self-Access centre was there. Hence, the use of computers for this study was moved to the University's main campus computer building that is farther from their usual classrooms. If the study were conducted again today, participants would have more and closer support.

Some pre-service teachers mention that the low level of performance on their spoken production comes from not having the opportunity to practice or learn the language because there were no classes available for them in their particular context, be it in the rural areas they live, or in the city because of economic or geographic conditions. They also mention that another reason for this

was because they did (or do) not have the time or resources to study it since they had to take care of a sick relative, which could be aggravated by situations such as the pandemic caused by the SARS-COV2 virus during the last two years.

This lack of opportunities to improve their foreign language skills presents itself as a nuisance in the sense that it poses a challenge to what teacher trainers can do to offer those learners opportunities to improve. Specially in terms of spoken production, which is one of the most important skills to display when they integrate to the professional field in the state of Sonora, a bordering state with the USA, an English-speaking region.

The scarce opportunities to develop spoken production and the condition in which it leaves learners, instilled in me a curiosity over ways in which the resources available in the University could help future teachers who needed it, improve their English-speaking skills. Attempting to do so in FtF sessions becomes complicated as the real time nature of FtF communication places a strong cognitive load, Sweller, (1994), or expectations of immediate responses on students who still cannot (or feel they cannot) produce spoken language as fluently, accurately and with the same linguistic range as other learners who have had more opportunities to learn it. Thus, there are some learners who present a low level of development in their spoken performance, and it is there where, I consider that, with the help of technology, a strategy could be devised to help them improve.

Ahmadi (2018), states that now that technology is integrated into our lives, the moment has come to think about also merging it into the curriculum and to seek for ways in which it can support the learning process. Since the Universidad de Sonora has technological devices available for learners to use, I began to think of ways in which I could integrate technology to help learners improve their spoken production.

According to Grobler and Smits (2016), studies have demonstrated that active oral participation assists in the process of learning a foreign language. Pramila and Thomas, (2019) claim that current technology offers endless opportunities to those interested in learning a foreign language but cannot or do not want to move from where they live. In this sense, the design of teaching/learning of foreign language speaking experiences or tasks in online environments, particularly in English, where learners can participate orally is still incipient and of special interest for this study.

1.2 Rationale

At the centre of this thesis is the teaching/learning of speaking in an asynchronous online environment. This study begins from the position that spoken production in English is difficult to achieve for learners who have not had the opportunity to live in English-speaking countries or who have not studied in bilingual schools as is the case with some of the students I have had the opportunity to teach at the BA in ELT program at the University.

As a teacher, my interest in this topic began when I became aware of the difficulty some students showed in their spoken production, even when some of the learners were in the later semesters of their studies. I noticed that some of those future teachers were more reserved in their opinions and only participated if asked while some other participated more freely. I later came to realize that those learners were less willing to communicate because they felt they did not have the same proficiency in speaking as did their peers. Because of the location of Sonora (next to Arizona in the USA) there is a mix nature in the English proficiency of students with some having lived or studied in English-rich school contexts and others who have not. In the majority of Mexico, it is common not to have this access to English rich mediums for learning.

My interest increased after being part of a round table in 2016 where employers from different institutions gathered to discuss their perspectives on the graduate teachers they employed from the different BA in ELT degrees in the city. Some of those employers referred to difficulties with spoken production from some graduates during the session. This led me to think about strategies I could implement with which I could help learners with moderate to low spoken production skills improve their spoken performance during their studies.

As a teacher trainer I was motivated by the fact that although I had students not participating enough, they were pre-service teachers, and there was an opportunity to find a way to help them improve their spoken production and, at the same time, involve them in this quest for improvement in a way that they could learn skills or strategies that they could implement in their future teaching practice.

As a researcher, the most fitting process I found was Action Research, because its adoption and implementation “entails a change, and that this will require agents who are willing to change and be changed” Banegas & Consoli, (2019: 176). The authors define Action Research as a “research approach which frames teaching and learning as situated social practices wherein reflection, on the part of the main teaching and learning actors, is crucial to identify issues that affect such practices”. My interest in the topic was initially heightened by the fact that, in the year 2017, there were only two Action Research articles Grosbois, (2011) and González Otero, (2016)

studying the effect of voice discussion forums but none specifically on spoken production and that the studies made were primarily with lower proficiency level students and not with higher intermediate proficiency students.

1.2.1 Research Gap

The lack of research into the effect on spoken production development on higher intermediate proficiency students is the first research literature gap identified I was interested in addressing with my research. Additionally, Hughes & Reed, (2017: 123) mentions that spoken production/speaking research covers many fields in linguistics and applied linguistics including “phonetics, phonology, sociolinguistics, pragmatics, intercultural communication, and second language pronunciation”, but this list does not mention the research into speaking in Computer Mediated Communication (CMC).

Likewise, Albiladi, (2020) researched the trends in EFL research for the previous ten years and digital literacies, methodology, and English for Specific Purposes take the first three places, they present a list of the fifteen most commonly researched topics and spoken production (speaking, or oracy as it is sometimes also referred to) is not present. Albiladi, (2020) also reported that qualitative is the most common approach to research with 47% of the articles using it, 32% used quantitative and mixed methods 21% but did not refer to Action Research studies.

This gap in researching spoken production on higher intermediate learners through audio or voice-based Asynchronous Online Discussion (AoD) forums with Action Research led me to begin this research project. Much of the existing research on voice-based is speculative or based on student perceptions, rather than measuring concrete learning outcomes (see 2.4.3 and 2.4.5). This is the reason why this research intended to measure gains with pre and post-tests after an intervention with voice based AoD with a higher intermediate group of pre-service teachers.

Several studies suggest AoD may help improve fluency, accuracy, complexity in the development of spoken production, but acknowledge small sample sizes limit generalizability (e.g. Wilches 2014, Yaneske & Oates 2010). This research intends to explore whether there is a change in fluency, accuracy, and/or complexity or in any other aspect related to spoken production in a larger group size with 36 participants.

AoD, in the form of discussion forums have become a common way to practice communication online, Nami, Marandi and Sotoudehnama, (2018), mention that discussion forums have become more popular in professional development research in the last years because of the opportunity they present to interact in an asynchronous environment. Thus, it is important to explore the impact that the design of tasks in these asynchronous interactions in the form of discussion

forums may have on spoken production and seek for new ways of designing the teaching/learning of speaking in online environments as well as exploring their effects.

The above has steered me to try to research the impact of new ways of fostering and developing spoken production in an online environment, and in a setting that does not require them to be connected to the Internet at a specific time (asynchronous). The latter since, many times, this is another obstacle for them to continue studying.

I began this research with the conviction that there are benefits that tasks designed for text-based discussion forums can bring to the learners, and that these same forums, if designed with the purpose of enhancing speaking production, could help all those who do not have either the time or the opportunities to develop it. This is possible because they would have the opportunity to practice at their own time and pace and be more willing to speak as mentioned by C. Tseng and Huh, (2016:2).

Recent global developments in terms of the COVID-19 global pandemic have reaffirmed my commitment to try to find ways in which learners can try to develop their spoken production capabilities in an online environment. If they do not have the opportunity to improve, the skill gap between those who have access to studying or practicing English and those who do not will widen and have repercussions in their future job opportunities. From personal experience, besides observing learners' common reasons for not being able to study such as lack of funds, having to take care of family at home, educational institutions being far and not having the necessary academic skills, now the possibility of a disease preventing learners from rural areas from moving to urban cities to study can deepen lack of access to educational opportunities.

The ability to speak well is one of the most important to acquire by learners as mentioned by Bailey (2006:1), and to migrate its teaching to an online environment poses many challenges in terms of decisions over the hardware and software, medium selection, design of tasks among others (see section 2.4.5).

In terms of a research contribution, this study will lead to a better understanding of the impact of the use of technological tools in the development of second language spoken production. More specifically, it provides insight into the impact of AoD on spoken production in terms of fluency, accuracy, complexity, and affective factors on both higher intermediate and lower proficiency learners. This study will be beneficial to language teachers, instructional designers looking to use AoD, and others interested in the implementation of digital tools in their teaching and learning, particularly those seeking ways to develop spoken production in online environments.

1.3 Aim of the Research

My quest began with the belief that the use of voice (or audio)-based AoD forums could provide a good vehicle for gaining spoken grammatical accuracy and range. I was interested in how teachers could design tasks and use them in online discussions. I started by looking at how grammar was used, taught, or learned in these AoD forums in the field of teaching/learning of English as a Second Language (hereinafter ESL) and English as a Foreign Language (hereinafter EFL).

The more I read about these voice-based AoD forums, I began to notice other interesting patterns. For example, I found that voice-based AoD forums were studied not only in ESL/EFL but in other fields such as: Social Media Baird & Fisher, (2005), Physiology King, (2008), Psychology C. K. Cheng et al., (2011), Education Grosbois, (2011), Business Venter et al., (2012), TESOL/Applied linguistics Rogerson-Revell et al., (2012), Nursing Denson & Shurts, (2018 and 2021), Mathematics Fay, (2017), Teacher Training McCabe, (2017), Farha & Chang, (2017), J. Chen & Bogachenko, (2022), and Second Language Acquisition (SLA) Yaneske & Oates, (2010), Ranasinghe et al., (2010), Poza, (2011) among others. They all had a wide range of interests, not only grammar.

I found that CMC was an effective discussion stimulating tool Beauvois, (1998), and that task structure and conditions affected fluency, complexity, and accuracy Skehan & Foster, (1999) among many other ideas. With these, I realized that voice based AoD forums could be used not only for the development of spoken grammar but for an increasing wide range of topics. This led me to become interested in researching what other aspects of learning a second or foreign language voice-based AoD forums could impact.

To better understand these aspects of AoD forums, I decided to shift from my initial tendency to focus on measuring results from pre and post-tests quantitatively to taking a more predominantly qualitative approach. I wanted to learn about the experiences of AoD forum users and how they were using AoD forums to learn. To achieve it, I conducted a focus group, discussions, reflections, and interviews with AoD forum users and analysed the data to identify themes and patterns.

With the above changes, the aim of the present action research is to learn about the effects that activities designed in a specific form of Asynchronous Computer Mediated Communication (ACMC), discussion forums (also referred to as Asynchronous Online Discussion (AoD)), have on a group of English Language Teaching (ELT) pre-service teachers and their perception of how spoken production is taught/learned online. It also intends to explore any other effects that might arise during the course of this project. It aims to identify the effect on the opinion as to how to teach and learn spoken production online as well as a reflection on the impact it has and/or how it affects their own spoken production.

Furthermore, it intends to show, through cooperative action research, the effects that activities designed in AoD forums, produce in English Language Teaching trainees since, as claimed by Burns, (1999) Action Research integrates the ideas and expectations of all the actors that are part of the situation. Because of this, as part of the project, participants were integrated into the design of the forums and with their own feedback, a new forum was created which they responded again, this cycle repeated four times.

Asynchronous online discussion forums and their task designs are analysed to find out how they affect or influence learners' perceptions and opinions towards the learning/teaching of spoken production in an online setting through their own design and subsequent experience and whether the activities change their own speaking skill proficiency. This study also seeks to shed light on any other aspects that might be influencing spoken production in AoDs such as interaction, task design, topics, motivation, autonomy, willingness to participate, hardware and software integration among others.

To summarize, this research study intends to explore the effect in terms of the learner experience and the task designer (or instructor) perspective, of the development of spoken language, of changing attitudes to the use of voice-based discussion forums for foreign language learning, language teaching/learning, or any other aspects that may appear during the analysis of the data.

1.3.1 Research Questions

Given the aim of this mixed methods research study, it intends to achieve the above by exploring the following research questions:

RQ No 1.- What is the impact of the use of asynchronous voice-based discussion forums in the language classroom on: a) the development of spoken language competence? and b) individual affective factors?

This question, in part a, seeks to understand the impact of the different affordances that this type of technology offers for the development of speaking skills (refer to sections 2.4 and 2.5). These affordances include the planning time needed to prepare an accurate spoken contribution to a discussion, the capacity to edit before posting and the ability to construct knowledge within a social network of similar learners (see section 2.4.5) among others. In part b, it aims to comprehend the effect that the voice forums or any element of its design or use has on affective factors that might influence learner perception or adoption of AoD forums.

In the beginning of the project, this question was too broad and did not allow to identify in an organized manner the impact that AoD had. Therefore, it was necessary to make the distinction

between the linguistic impact and the individual affective factors that enabled or affected students change of behaviour towards learning through voice based AoD.

RQ 2.- What techniques and strategies do L2 learners use when completing tasks in asynchronous voice-based discussion forums?

This question tries to identify the strategies that the learners use consciously or unconsciously, to improve their spoken language. It seeks to understand which strategies have the greatest benefits on spoken production and which ones do not have any impact or have a negative impact. This is the question that changed the least from the onset to the end of the project.

RQ 3.- What aspects need to be taken into account when designing L2 online voice-based discussion forums?

This question is aimed at understanding learners' perspectives (e.g. motivation, preferences, attitudes, and choices) on the integration of asynchronous online interaction through voice forums into foreign language teaching and learning. While the focus in this research is on spoken production and the use of voice chat, the participants in the research may also wish to use text, or not to reveal their identities and it is important to know their preferences as this could impact their motivation. Participants could also express other unintended either benefits or disadvantages that could be of interest for the Foreign Language Teaching community.

This question evolved throughout the research projects because at the beginning the objective was only to identify preferences, but as time progressed the importance of perspectives and roles and how they impacted preferences made the question short in scope. Thus, the aspects to be considered when designing can come from the perspective of the students, the instructor or the conditions of the context (e.g. no access to technology at home, no favourable conditions at home, etc.)

1.4 Thesis Structure

This thesis is organized into seven chapters where it means to shed light on the effects that voice based AoD forums can have on spoken production. The first chapter introduces the research, its context, rationale, aims and research questions. The second chapter discusses the literature review elaborating on the role of technology in foreign language learning, the concept of Blended Learning, the Interactionist and Sociocultural perspectives and their relation to interaction, computer mediated communication (CMC), AoD and its affordances and constraints, and finally, it defines the concept of spoken production and how it is taught and learnt.

Chapter three discusses the methodology undertaken to conduct this study elucidating on the research paradigm, its design and instruments, participants, ethical considerations, the role of the researcher, course design, the actual implementation, and data collection and analysis. Chapter four discusses results of the intervention with the participants describing findings from pre and post-tests, and the perception of the whole group regarding forum design, strategies used to perform the forum tasks and their overall positive or negative experience, concluding with results related to motivational factors that appeared during the project. Chapter five describes an account of five participants representative of the group where they are analysed in depth in order to try to understand effect of the voice-based AoDs that might not have been evident in the group analysis. The study concludes with a discussion and conclusion chapters presenting general findings and concluding remarks.

Chapter 2 Literature Review

This chapter provides theoretical support to this mixed methods research, which employs Collaborative Action research in its instrument, to discuss contributions and benefits of technology in the field of Foreign Language Teaching/Learning (FLT or FLL), and how the blend between technologies and classroom for FLT/FLL is changing the landscape of this field (see 2.1). It also elucidates on research into how to design such blends considering different factors including the interactionist and sociocultural perspectives and the role of interaction (refer to 2.2, 2.3) for language learning. Additionally, it dwells on the concept of Computer Mediated Communication and the differences between synchronous and asynchronous communication, and on how the latter through discussion forums impacts spoken production according to literature (see 2.4).

The largest sections on this chapter correspond to the literature related to the effects that both text and voice-based asynchronous online discussions (AoD) have on foreign language learning. Finally, the concepts of spoken production and communicative language competence are addressed which is the main objective to be explored through the task design and implementation of AoD forums. To finish, a summary of the chapter is presented (see 2.6.) These areas contribute to understanding how CMC, through voice-based AoD forums, impacts the development of spoken production, or any other element that might arise, in a group of pre-service English language teachers.

For developing this review, the first step undertaken was to access different databases to which I had access, and to start using word combinations that would yield articles that studied the effects of discussion forums. Databases considered were Google Scholar, Mendeley, the University of Southampton Delphis engine, and from there, journals, authors, book chapters and/or books that appeared in the articles found. Word combinations used for searching text-based discussion forums included asynchronous online interaction, text-based asynchronous online discussion forums (AoD), text discussion forums, discussion forums, discussion boards, forums, fora, and a combination of these words in two languages, Spanish and English. This process continued throughout the time I have been working on this thesis as new studies have appeared every year. This process was performed in search of text-based discussion forums and later, it was repeated in the same way for voice-based discussion forums replacing the word text with either voice or audio.

After collecting the articles, book chapters or books that dealt with the effects of discussion forums, I started integrating the articles onto Mendeley (a citation reference manager) for integration into the thesis document. In order to better manage the useful information, a MS

Excel spreadsheet was generated for each of the topics (text-based discussion forums and voice-based discussion forums) with the following headings: a) year & name of article, b) No. of participants & where, c) Research Instruments, d) Type of methodology, e) Results, f) Conclusions or suggestions, g) limitations, h) Area of Study (ELT, Teacher training, nursing, etc), i) Journal, and j) Number of citations under which the corresponding information was captured for each of the articles in order to visualize the information better (see Appendix BB).

The text-based discussion forum literature yielded two-hundred and fifty-eight articles; out of those, thirty-four articles were selected (see Appendix EE) on the basis of the valuable information they provided for either forum task design or foreign language learning considerations. For the case of and voice-based discussion, the search yielded seventy-eight articles (see Appendix AA), out of which twenty-eight were selected (see Appendix FF) on the basis of information related to forum task design and/or impact on foreign language learning with a special focus on spoken production. It is important to mention that new articles are being published every year; therefore, this review might not have all available articles up to date.

This section reviews AoD forums as technological tools for the foreign language learning classroom. Technology has supported foreign language learning arguably since its inception and the next section will discuss the relationship between these two elements.

2.1 Technology and Language Learning

The term commonly associated with the concept of technology is computer and even that word “has become a somewhat amorphous term that has come to include other devices such as mobile phones, tablets and wearable technologies” as stated by Ziegler & González-Lloret, (2022: 9.) The use of technology in Foreign Language Teaching (FLT) is not something new, Warschauer and Healey, (1998: 2) mention that it dates back to the sixties and that since then, it has evolved to a stage referred to as integrative, which seeks to integrate learners into authentic environments and to integrate different language skills, this seems to still be the prevalent view nowadays. However, this is still an ongoing integration or as mentioned by Otero (2016: 2), approaches and materials currently used have not advanced as fast as the students’ reality.

Technology has become so pervasive in our lives that its integration into language education was a matter of time, and although the FLT/FLL field is not keeping up with the integration of technology into the classrooms, there has been some progress. For instance, Jiang (2017: 413) elucidates on something he calls that Digital Multimedia Composing (DMC) and how it is drawing attention into FLT pedagogy. He explains that DMC refers to a practice that “involves the use of digital tools to produce texts by combining multiple semiotic modes that include, but are not

limited to, image, word, and soundtrack". Moreover, Ziegler & González-Lloret, (2022: 10) state that "as with any type of teaching resource –digital or otherwise– the effect on particular language skills and areas will depend on a great number of factors including the learning goals, the proficiency of the learners, and the teaching approaches adopted".

English is generally considered one of the most studied foreign languages around the world, or as Moran Panero (2016) states, it is spreading globally, through social strata and in different domains. The teaching and learning of foreign languages, in particular English in the face-to-face mode has existed for a long time but the teaching and learning online or a mix of both (blended) modes in which asynchronous communication plays an important part has become extensive in recent years with the spread of technology. As mentioned by Hockly (2018), Blended Learning has expanded significantly in ELT over the last decade and states that although many teachers and institutions are offering blended learning ELT programmes, "there is a need for support in how to do so effectively".

Furthermore, learners are used to having face to face classes but as technology has steadily entered the Language Teaching field, in recent years, there has been a change in course content delivery, instruction and interaction in higher education. As explained by Johnson and Marsh (2014), it is happening neither completely face to face nor completely online, it is incorporating a range of media and this combination has been referred to as Blended Learning.

While the inclusion of technology does not represent a panacea in education, it represents a tool, with its affordances and constraints that has become commonplace in the lives of learners. Venter, Jansen van Rensburg & Davis (2012) conducted a study based on the Technology Acceptance Model (TAM) and make the case that perceived ease of use, usefulness, study/job relevance and facilitating conditions are the most important factors for user acceptance of technology. Thus, it is paramount for teachers to select digital tools that have the above characteristics to achieve their successful implementation in classroom practice whether as part of face-to-face, online, or blended delivery modes.

In order to better understand the concept, the following section will attempt to define Blended Learning and the considerations needed in order to design a successful blend for the foreign language learning setting.

2.2 Blended Learning

The concept of Blended Learning (BL) has undergone several changes throughout the years, yet, there has been common ground around how the term could be defined in the Foreign Language

Teaching (FLT) field. Whittaker (2013: 12), defines BL in an English Language Teaching (ELT) context as a term “used to refer to any combination of face-to-face teaching with computer technology (online and offline activities/materials)”. In particular, for higher education, the author defines Blended Learning by quoting Banados (2006), as “a technology and classroom instruction in a flexible approach to learning” and further explains that it acknowledges the advantages of some online delivery but also uses other modes which can “improve learning outcomes and/or save costs.”

Cronje, (2020) contends that “a definition of blended learning that is based on the dimensions of face-to-face and technology-mediated instruction, does not provide an adequate theoretical underpinning” and proposes defining blended learning as “the appropriate use of a mix of theories, methods and technologies to optimise learning in a given context.” The same author argues that a part of Driscoll’s definition of blended learning which recommends a combination of “various pedagogical approaches (e.g., constructivism, behaviorism, cognitivism) to produce an optimal learning outcome with or without instructional technology.” should receive more consideration when defining BL.

Additionally, Hockly, (2018) explains that when referring to the technology mediated part of BL, it is considered as occurring in a location different from the face-to-face (F2F) instruction and very possibly in “the learners’ own time”. Nonetheless, she also mentions that BL can include “learners working individually with educational software on computers in the school building, either in the classroom itself, or in a separate computer lab”. For the purposes of the present research, it is the above definitions what will be understood as blended learning (BL).

Having an interest in how technology can be used to enhance language learning, Blended Learning (BL), which combines face-to-face (FtF) and online learning, represents a particularly promising approach for contexts where online learning is not widely accepted, such as in the University where this research study was conducted. In such contexts, BL can be a way to introduce learners to the benefits of online learning, particularly of voice-based AoD forums for developing speaking in a gradual and supportive way, and can also help to address some of the concerns that people may have about online learning, such as the lack of face-to-face interaction and the potential for isolation. BL represents an ideal vehicle for this research to approach learners to digital tools that could help them improve their spoken production.

Rasheed et al., (2020: 1) argue that “today, blended learning is considered the most effective and most popular mode of instruction adopted by educational institutions due to its perceived effectiveness in providing flexible, timely and continuous learning.” Although it is hard to consider the above state statement to be true in all contexts of all countries, particularly in Mexico, where

there are many regions with an important underdevelopment in technological infrastructure, it is a clear indication of how much Blended Learning has expanded in recent years.

The expansion of Blended Learning has raised other issues such as how to integrate it effectively and how to design it effectively. The next section will discuss considerations for the design of Blended Learning.

2.2.1 Blended Learning Design

Blended Learning (BL) is composed by a part of the course content being delivered face-to-face (F2F) while the other part is delivered online. Once an instructor has decided to use BL as its mode of delivery, the decision on how to design the specific blend needed arises. Whittaker, (2013) mentions that there needs to be a clear plan on how much time will be spent on the face-to-face part of the course to be taught and how much time on the online delivery; similarly, the creation, selection and/or adaptation of educational materials and their specific purpose need to be considered.

Hockly, (2018: 100), recommends four steps for designing a Blended Learning course:

- 1) The first one is to “carefully consider the context” and define design constraints. Namely, to make sure one knows the environment where the course is to take place and to know what can and cannot be done.
- 2) The second one consists of choosing the technology, decide the lead mode of delivery (face to face or online), the amount of time spent on each mode and the pedagogic purpose of each mode.
- 3) The third includes consideration of learners and teachers (the role of each in the design, interaction patterns, training, etc).
- 4) The last step is deciding how to develop and evaluate the blend.

Furthermore, the same author (2018), mentions that the areas to consider in designing blended learning courses include: Interaction, SLA research (see Thornbury, (2016)), task design and tools, materials, evaluation, integration, context, and teacher/learner training. She mentions that this is not a comprehensive list of considerations but rather a broad one and based on research up to date in ELT. Moreover, when selecting the technological components of the blend, Thornbury, (2016: 31) suggests twelve principles that such components should address:

- 1) Adaptivity or as stated by Balci (2017) whether the tool can adapt to the unpredictable, non-linear, incidental or idiosyncratic nature of language learning

- 2) Complexity or whether the tool addresses the complexity of language including its different linguistic characteristics (syntax, vocabulary, phonology, semantics, etc)

The same author elaborates that such tools should provide learners with the opportunity for:

- 3) Comprehensible and engaging input
- 4) Producing meaningful output
- 5) Directing the learners' attention to features of the language so that noticing is practiced
- 6) Learning tasks to be modelled and/or mediated so that scaffolding can take place
- 7) Learners to get specific and informative feedback on their input and output including ways on how to improve that which is still to be improved
- 8) Collaborate and interact with classmates using the target language
- 9) Automaticity, whereby learners engage in massed practice and conditions similar to where they would use the language
- 10) Learners to practice and learn the acquisition and use of chunks and formulaic language
- 11) Personalizing the learning material and create a personal association with it, and finally
- 12) Using an engaging and challenging tool to increase the possibility of sustained and repeated use.

Hockly (2018) states that the spread of BL has been influenced by two most important aspects: affordability and accessibility of hardware and software, mentioning that cost reduction of BL is still subject to debate. She further adds that large class sizes, lack of classroom space, teacher dissatisfaction with face-to-face time exposure to foreign languages, political instability, and difficulties to attend classes physically are important factors when choosing blended learning.

An important factor to consider when designing blends is how the interaction that so easily occurs in a F2F class can be transferred or emulated in the online part of blended learning. Interaction whether between the teacher and the students or among the students themselves plays an important role in foreign language learning and will be explored more in depth in the following section.

2.3 Interaction in Foreign Language Learning

Interaction is not the main focus of this research study, but it plays a very important role in Asynchronous Online Discussions (AoD) in the form of discussion forums since spoken production is usually not generated without thinking about a hearer and expecting some sort of response. The CEFR, (2018:81) states that when it was developed, "the notion of written interaction did not meet with universal recognition and was not greatly developed", reason why most interaction scales in their volume refer to spoken interaction; they also mention that interestingly, written interaction "has taken a more and more significant role over the past 20 years". Through

interaction, learners can allow others to see how competent they are at communicating in the target language.

Interaction is a crucial element to consider in the design of Foreign Language Teaching and Learning both in online and face-to-face environments. Kung-Ming & Khoon-Seng, (2009: 122) posit that “interaction will occur in any learning environment” without a doubt and cite Wagner (1997) when defining interaction as consisting “of reciprocal events requiring two objects and two actions where interplay and exchange occur and individuals and groups influence each other”. Moreover, they stated that it was “important to note and acknowledge that both asynchronous and synchronous interaction have their advantages as well as shortcomings” and that it was important to understand that choosing the “delivery systems largely depends on the needs of the students and the nature of the subject matter.” Thus, it is not only a matter of interacting but of deciding the type of interaction, the why, the when, and the how.

Kung et al., (2009: 122) conceive interactivity as existing in three ways, either in “student-student interaction, student-instructor interaction, and student-content interaction” and mention that as “distance-education technology increasingly moves toward multimedia-oriented systems, a more effective synergy of synchronous and asynchronous interaction is required.” They add that a study by Soo and Bonk (1998) “found that the experts feel that learner-learner interaction impacts student learning the most (compared to learner-instructor interaction and learner-content interaction).”

Lantolf & Thorne, 2006 and Ortega, 2007 cited in Pellettieri (2010), state that learner interaction is justified in Second Language Acquisition theory “where both the more cognitively-oriented interactionist perspective and the sociocultural perspective posit that conditions for language acquisition are optimized when learners are involved in meaningful L2 interaction”. The author also suggests that only some types of interactions foster acquisition of a Second Language (2L), stating that negotiation of meaning where learners use the language to clarify non-understanding is one of the most widely studied.

2.3.1 The Sociocultural Perspective

Zuengler & Miller, (2006: 37) state that the “sociocultural perspectives on language and learning—view language use in real-world situations as fundamental, not ancillary, to learning”, reflecting that language is not considered as input but rather a “resource for participation in the kinds of activities our everyday lives comprise. Participation in these activities is both the product and the process of learning.” The authors use the term “sociocultural perspectives”, in plural since, for them, it refers to different approaches to learning that consider the “social and cultural

contexts of learning”, but they concede that for some “the term sociocultural theory is equivalent to Vygotskian theory.”

Additionally, the same authors explain that, for Vygosky, development of cognitive process is not an innate capacity but that it is the transformation of this capacity or capacities, when they interact with society and culture, which leads to development of cognitive processes of the individual, and that one of the most important means for this interaction to occur is language. In this way, either a first or second language is used to generate sociocultural interactions and, these interactions, in turn, foster the acquisition of that same language. This is especially relevant for this study because this Vygotskian perspective theorises that for language learning to occur there needs to be interaction between individuals in meaningful sociocultural contexts; thus, designing interactions in AoD that are meaningful for participants is an important aspect to consider for this research.

2.3.2 The Interactionist Perspective

On the other hand, when discussing the interactionist perspective in language learning, Long, cited in Ritchie, W. C., & Bhatia, (1996: 452) argues that “negotiation work that triggers interactional adjustments by the NS or more competent interlocutor, facilitates acquisition because it connects input, internal learner capacities, particularly selective attention, and output in productive ways” meaning that it is interaction which aids acquisition to occur, providing support for interaction to be integrated into the AoD forums used in this study.

Gass, cited in Kaplan, (2012: 217-231) mentions Input as a central behaviourist view for language acquisition (LA); and since LA occurred through imitation and habit formation, the input provided had to be studied to understand what the learner was imitating or what habits was adopting. In terms of interaction, she states that literature’s main claim on the subject was that second language learning happened through conversational interaction. In addition, she specified that recasting, “a reformulation of an incorrect utterance while maintaining the original meaning” together with meaning negotiation was more beneficial than only negotiating meaning for learning.

The same author adds that “In the past 30 years or so, numerous studies have been conducted on the relationship between interaction and learning, most showing a positive relationship.” She mentioned the work by Mackey and Goo (2007), citing that they found “that interaction is facilitative of the acquisition of both vocabulary and grammar. There is a stronger immediate effect for vocabulary, but a delayed and lasting effect on grammar. Both feedback and modified output were significant factors in promoting learning”.

Gass, in Kaplan, (2012: 217-231) makes the case that “there is little doubt as to the facilitative effects of interaction on learning” and when asked why interaction contributed to learning, she examined four areas: a) attention, b) working memory, c) output, and d) contrast. As for the first area, she suggests that “Central to the interaction hypothesis is the concept of attention or noticing”, adding that “If there is no attention to a particular part of language during an interaction, then it is difficult to attribute the source of change to the interaction itself.” This specific point adds to the design of this projects since the main purpose of the course where the research project was embedded was to develop grammatical points.

In addition, for the second area, she proposes that “working memory is generally considered to incorporate both processing and storage functions of memory”, namely, “working memory keeps representations in temporary storage, allowing operations on those representations to take place.” The author also suggests that there are differences in low working memory capacity and high working memory capacity learners and that “more significant than working memory differences are differences in inhibitory control (a construct related to working memory)—that is, the ability to suppress information that is not relevant.” This is particularly noteworthy for this project as participants’ working memory can benefit from having more time to process in an asynchronous mode of communication such as AoD forums, and with that time, their focus on the specific aspects of the grammar points being studied can improve.

For the third area, output, Gass discusses that another author, Swain, presented the idea that a learner “needed more than input; learning a second language required a significant amount of output. Output, or language production, forces learners to focus on the syntax of an utterance and, consequently, on formulating hypotheses about how the target language works”. Adding that “Output, thus, would seem to have a potentially significant role in the development of syntax and morphology”. Final remarks on this point are particularly useful for this project as she states that in a study by Sato and Lyster (2007), “the interlocutor partner (native speaker or another learner) may impact the amount of modified output; learners tend to produce more when interacting with other learners than with a native speaker” again, providing support to the idea that AoD forums within a language learning class could bring benefits for spoken production since it would allow for an important amount of output focused on using specific syntactic structures to be produced.

The fourth area discussed by Sussan Gass is the Direct Contrast Hypothesis defined as follows:

When the child produces an utterance containing an erroneous form, which is responded to immediately with an utterance containing the correct adult alternative to the erroneous form (i.e., when negative evidence is supplied), the child may perceive

the adult form as being in CONTRAST [emphasis in original] with the equivalent child form Kaplan, (2012: 230)

This fourth area is another element of consideration to this research project because the asynchronous nature of AoD forums will permit the participants to listen to the participations of their classmates and compare or contrast, as the hypothesis indicates, their utterances against their own and thus, make decisions on how to present their contributions to the forums.

Hull & Saxon, 2009, cited in Nami, Marandi and Sotoudehnama (2018), postulate that the active interchange between individual experience and the social world results in learning, and that “the rationale grounding this widespread advocacy is the Vygotskian (1978) notion of social constructivism in which knowledge construction is considered a social process that stems from dialogue”. They also mention that interaction is considered a vital element of teacher development. In this study, participants are pre-service language teachers in the process of development.

Ziegler & González-Lloret (2022), state that “the interactionist approach to second language acquisition (SLA) posits that receiving input (Long 1981, 1996), engaging in negotiation of meaning (Varonis & Gass, 1985) and producing output (Swain 1985), during meaning-focused interaction facilitates second language (L2) development”. The authors also mention that through the interactionist approach “learners have the opportunity to monitor their production (Swain, 1995, 2005), as well as test their hypotheses about the L2 when they produce output.” During face-to-face discussion, the production of oral output by learners who do not have a highly developed speaking skill might be impeded due to shame, shyness or the high cognitive load produced by the immediateness of the expected response. Voice-based AoD forums allow for the mitigation of this expected immediacy and for the integration of the above considerations into an interactive educational task.

There are several aspects to be considered when working with spoken production in voice-based discussion forums (see 2.5) and different authors may highlight some aspects over others. For example, the CEFR, (2018: 171) mentions range, accuracy, fluency, interaction, coherence and phonology in what they call qualitative features of spoken language (see Appendix R.) However, Tecedor & Campos-Dintrans, (2019) state that “L2 speaking production has traditionally been evaluated according to three measures: complexity, accuracy, and fluency (CAF)” while also mentioning that the objective of the teaching of a second language “is to help learners develop in these three areas as they advance in their learning process. Research from a cognitive framework, however, indicates that focusing on all of the three components at the same time may not be

possible". This last comment implies production in a synchronous setting, thus providing an opportunity to explore if they could be integrated in an asynchronous environment.

In the same vein, they discuss the works of Skehan's (1998), and Robinson's (1995) explaining that the:

Limited Capacity Hypothesis states that L2 processing demands, along with learners' limited attentional resources, create a tension between the three CAF traits, which results in a trade-off effect. Learners either favor the meaning of the message, which results in greater fluency, or one of the subcomponents of form, either accuracy or complexity, but not both of them at the same time. Tecedor et al. (2019: 5)

In contrast, Robinson's (1995) Cognition Hypothesis claims that a task's characteristics (e.g. number of elements, one-way vs. two-way tasks) and administration conditions (e.g. pretask planning time) make learners focus on either meaning or form of the message, and that the trade-off between accuracy and complexity suggested by the Limited Capacity Hypothesis may be overcome under certain circumstances. Specifically, the Cognition Hypothesis predicts that complex monologic tasks promote more accurate and more complex language to the detriment of fluency, whereas simple tasks are likely to foster only fluency. Tecedor et al. (2019: 5)

These two hypotheses present an important contribution to this research project as the AoD forums use this information in their design. As mentioned by the author, simple tasks probably foster fluency and complex ones accuracy. Nevertheless, they do not explain if there is a difference in preference by learners on each one or if that preference might influence their performance in those tasks. Thus, including both complex and simple tasks together with interaction in the design of AoD forums can assist in understanding their effects on developing spoken language.

Moreover, the CEFR (2018: 81) explains interaction as that involving "two or more parties co-constructing discourse" mentioning that it is an important part of spoken production. It also mentions that "spoken interaction is considered to be the origin of language, with interpersonal, collaborative and transactional functions". Specifically, they divide spoken interaction into three macro functions 1) Interpersonal: a) Understanding the interlocutor and b) Conversation. 2) Evaluative: a) Informal discussion, b) Formal discussion and c) Goal oriented cooperation. 3) Transactional: a) Obtaining goods & services, b) Information exchange, c) Interviewing and being interviewed, and finally d) Using telecommunications (this last one concerns use of the telephone and internet-based apps for audio and video communication).

Furthermore, the CEFR (2018: 81), explores what they call Interaction Strategies and they divide them into: a) taking the floor (turntaking), b) cooperating, and c) asking for clarification. The cooperating strategy is divided into a) cognitive strategies which involve framing, planning, and organizing the interaction, and b) collaborative strategies which involve interpersonal and relational interactions. These functions and strategies are considered for the interaction that occurs between participants engaging in spoken production during the discussion forums that are part of this research study.

With the integration of technology into the FLT/FLL field, spoken interaction now has received a description for its online occurrence. To discuss the topic, the CEFR (2018: 96), states that “Online communication is always mediated through a machine, which implies that it is unlikely ever to be exactly the same as face-to-face interaction”, and presents some requirements for successful online communication: a) the need for more redundancy in messages; b) the need to check that the message has been correctly understood (which can impact negotiation of meaning); c) ability to reformulate in order to help comprehension, deal with misunderstanding; and d) the ability to handle emotional reactions. These are aspects in which the asynchronous nature of discussion forums might have a positive impact since participants are able to listen to the messages as many times as they need to check comprehension and prepare their own contributions using the contributions of their classmates as examples to follow.

Online conversation and discussion are regarded as a “multi-modal phenomenon” by the CEFR and divide them into: a) simultaneous online interaction and b) consecutive online interaction which is how the CEFR refers to synchronous and asynchronous interaction. The CEFR (2018: 98) also states that “A rigid separation between written and oral does not really apply to online transactions, where multimodality is increasingly a key feature and resource, and the descriptors therefore assume the exploitation of different online media and tools according to context”. This is relevant for this study as multimodality will be explored to attempt to understand learners’ perspectives.

Loncar, Barrett and Liu (2014), mention that in both environments, blended and online, learners are asked to interact with both classmates and materials. They state, citing Chen and Wang (2009), that “teachers, from primary school to university, are increasingly aware of the affordances of online forums to promote interaction and complex thinking that is not always effective in traditional face-to-face learning situations”. In order to emulate the communication that occurs in the language classroom, we need the support of technology, computers provide that means, they can mediate the communication between the individuals in an online setting. This is often referred to Computer Mediated Communication (CMC), and it is this which allows

both synchronous and asynchronous online interaction to take place, and particularly it is which permits asynchronous online discussion forums to exist.

The next section will discuss Computer Mediated Communication (CMC) and the findings of literature in terms of the effect that AoD forums have on language learning, it will explore text-based and voice-based AoD and some recommendations as to how to design AoD forums. The biggest portion of literature in this research appeared in text-based discussion forums. This is not surprising since the first uses of computer mediated communication were in writing, and thus, there are more studies since they began earlier than the ones that are voice based.

2.4 Computer Mediated Communication (CMC)

Morris & Blake, (2022: 149) argue that “we are all social beings who explore and mediate the world through our interactions with one another” and that this inherent characteristic “carries over into the digital realm as well.” They highlight that “CMC is firmly grounded on this social bedrock in which interactive exchanges occur, which is reflected in two theoretical perspectives that remain predominant in the field of SLA: the Interaction Hypothesis and the Sociocultural Theory” (see 2.3.) Thus, CMC enables this interaction, which is necessary for learning to occur, in an online environment.

Within a Blended Learning environment, the time and type of interaction that students have with their classmates and teachers during the online portion of instruction becomes important. According to Pellettieri (2010), one type of interaction used through technology nowadays is Synchronous Computer Mediated Communication (SCMC), which involves communication that occurs instantaneously or in “real time” over a network and displayed to the interlocutors in a shared digital space. He further elaborates studies show that Synchronous CMC “facilitates the acquisition of oral competence.”

Nicolas-Pino (2013), mentions that although Synchronous CMC currently seems to enable development of speaking, its counterpart, asynchronous CMC (ACMC) “is relegated to written practices such as sending e-mails or using online bulletin boards.” He further elaborates on the idea that ACMC is not considered much in online speaking development but that the actual use is now changing.

Payant and Bright (2017), explain that Asynchronous Computer Mediated Communication (CMC) is understood as one that presents the opportunity for “learners to mediate their learning via technology, but they are not required to be online at the same time”. They also cite Lai & Li, 2011 when stating that “common uses of CMC include the creation of blogs, wikis, and emails.” In

addition, Morris & Blake, (2022) contend that in “Computer Assisted Language Learning (CALL) literature, ALCMC encompasses exchanges via e-mail, discussion forums, pre-recorded video messages, and even voice boards.”

Asynchronous CMC (hereinafter ALCMC) through discussion forums, which will be the focus for this paper, will be referred to as asynchronous online interaction (or ALCMC) since the usage of tablets or cellular phones make the term Computer Mediated Communication short in scope of the tools available to learners today. Asynchronous Online Discussion (AoD) in the form of text-based discussion forums and voice boards which are implemented through ALCMC are the focus of this research study and will explained further in the following sections. The section below will elaborate on the affordances of ALCMC for language learning.

2.4.1 Asynchronous Computer Mediated Communication (ALCMC)

Morris & Blake, (2022: 148) claim that with the widespread use of technology nowadays, teaching without some form of technology would be a very limited and artificial learning environment and add that education platforms that allow audio and/or video posts foster oral communication. This is enabled through the use of either voice boards or discussion forums which permit ALCMC. There is a growing amount of research on the effect of both synchronous and asynchronous online interaction over the learning of foreign languages, but these following sections will focus on asynchronous online interaction as it is the main focus of this research. For instance, McIntosh, Braul and Chao (2003) mention in their study that research consistently identifies 2 major benefits of ALCMC: 1) deeper thought process and 2) facilitation of collaborative learning.

Hew & Cheung, (2012: 3-4) indicate that ALCMC “allows students to participate in the discussion at a pace that they are comfortable with”, which gives learners “ample time to respond to other students’ comments”. They add that this delayed interaction might help develop thinking skills, and problem solving. In addition, they state that discussion forums demand from learners the presentation of their thoughts in the form of language and that these thoughts can be worked on and improved through questioning, clarifying, or elaborating. They also mention that ALCMC fosters a level of reflection that often does not occur in F2F classes. They suggest that just the simple fact of expressing their thoughts can assist in organizing their ideas more clearly. Finally, they state that ALCMC allows for higher order thinking skills such as analysis, synthesis, and evaluation to be developed.

Furthermore, Kung-Ming & Khoon-Seng, (2009: 123) report that the advantages of asynchronous interaction are: a) Flexibility, because “it allows the access to learning material at anyplace and anytime” and learners can “participate when and if they want to”, b) Time to reflect, because

“there is no need to give immediate response. It gives the opportunity for learners to think, research, reflect, formulate, and back up their ideas and thoughts in a more coherent and concise manner”, adding that learners can “access archived discussions to follow the flow of discussion”, and “wait and input their ideas when they are comfortable with the discussion”, c) Anonymity or pseudonymity, where “learners feel more confident and contribute more as there is less pressure”, arguing that “this is especially true for learners who tend to be shy or laid-back in classes”, d) No Time-Zone constraints, explaining that it “is available at the time convenient to learners around the world” since synching with their time zones is not an issue, e) Situated Learning, because “it provides opportunities to integrate ideas being discussed in the course with experiences on the job or home front”, and is it f) Cost Effective, because they consider that “text-based systems like e-mail require little bandwidth and low-end computers to operate and thus provide equitable access for learners”. Although this does not include video and voice asynchronous interaction, the reasons apply to them as well, except for the bandwidth required since videos probably consume more, however, these advantages were obtained in 2009 and Internet speed and tools for ACMC have become more varied and widespread since then.

Additionally, Abrams, 2003; Wang & Woo, 2007; Yaneske & Oates, (2010) cited in Wilches (2014), explain that ACMC “enables students to take their time to elaborate ideas and edit as many times as necessary before posting”. ACMC through discussion forums is a tool that has been generally used, through text messages, to foster communication, but a newer use, voice-based discussion forums as an asynchronous online interactive activity (also referred to voice boards) can have certain benefits as well that are in accordance with that established by Kung et al. (2009). Asynchronous online interaction through discussion forums will be discussed in the following section.

2.4.2 Asynchronous Online Discussions (AoD)

ACMC in the form of discussion forums has gained acceptance in the last decade. Scott and Ryan, (2009), mention that “The use of computer-mediated communication (CMC) medium is evident in the curriculum of many courses throughout the physical world in universities such as in Australia, New Zealand, South Korea, the UK, and the USA”. They explain that learning through online discussion forums is a meaningful strategy for learners to progress in their language skills. James et al., (2022) argue that “Higher education (HE) has seen a progressive increase in literature investigating pedagogical use of asynchronous online discussion boards and facilitated online discussion boards”.

Kadagidze (2014), makes the case that a specific use for discussion forums, “to negotiate and construct knowledge, is an example of using the technology as a cognitive tool... Cognitive tools

and environments stimulate cognitive learning strategies and critical thinking”. Additionally, she elaborates that learners read their classmates answers and interpretations and compare them with their own ideas saying that this is a process of “reflection, construction and reconstruction of domains of knowledge”, adding that this leads to a deeper and more lasting learning.

Nami et al. (2018), contend that despite the abundance of research in this regard across other disciplines citing (e.g. Hawkes & Romiszowski, 2001; Hull & Saxon, 2009), studies that explore the potential of discussion lists for promoting asynchronous interactions and the nature of such exchanges in the context of CALL teacher preparation remain scant (e.g. Wang, Chen & Levy, 2010). One of the ways in which asynchronous interaction can occur online is through text-based discussion forums. The following section will discuss the most relevant findings that these studies on forums report on language teaching/learning omitting literature that is not relevant to forum task design, that has been challenged and debunked or that is not applicable anymore due to changes in either theory or technology.

2.4.3 Text-based Asynchronous Online Discussions

2.4.3.1 Background

Text-based Asynchronous Online interaction (ACMC) saw its beginning in discussion forums in more formal academic settings. Metz, (1994) dates it back to the 1969 with the creation of e-mail programs and states that “researchers have used it as a tool to examine its effectiveness within organizational, interpersonal, and mass communication contexts”. He explains that “under organizational theory, CMC is used under two criteria: Task-related use and social-use”. There are numerous studies that show affordances or constraints of using text discussion forums starting from the work of Metz, (1994) who wrote a literature review of CMC up to that moment to more recent work by Cheng et al., (2022) discussing how CMC through AoD helps learners develop problem-solving skills and how this affects overall course grade. The impact of text-based forums on language learning and education in general has been studied for almost thirty years now and research has generated varied contributions to this field but is not as widespread in the field of FLT. The most relevant contributions will be explored below.

The earliest research study available was Metz, (1994) where he advocated for CMC to be recognized not as a broader set of communication but as its own context. He explained that “CMC's "models" are delineated by the structural definition of the programs which support electronic communication” and that these electronic models replaced theoretical ones. This article did not explore impact yet but was trying to better understand the meaning of CMC. More

recent studies delineate CMC for language learning through the sociocultural theory and the interactionist perspective as discussed in section 2.3.

2.4.3.2 Models for AoD in CMC

Anderson et al., (1997) contributed to the literature on CMC with the development of a five-phase interaction analysis model for examining social construction of knowledge in computer conferencing. The five phases were:

PHASE I: Sharing/comparing of information, PHASE II: The discovery and exploration of dissonance or inconsistency among ideas, concepts, or statements (This is the operation at the group level of what Festinger calls cognitive dissonance, defined as an inconsistency between a new observation and the learner's existing framework of knowledge and thinking skills.) PHASE III: Negotiation of meaning/co-construction of knowledge. PHASE IV: Testing and modification of proposed synthesis or co-construction. PHASE V: Agreement statement(s)/applications of newly constructed meaning. Anderson et al., (1997: 414)

They theorized "interaction in a CMC context" as the vehicle for the co-construction of knowledge. This model was influential for this study as its phases are a good indication of the types of activities and interactions that can occur in an AoD and how they assist with co-construction of knowledge but, since co-construction of knowledge is outside the scope of the present study, they were omitted together with other studies that focused on that same topic.

Perhaps one of the most relevant studies in the field of CMC is the one by Garrison et al. (2000), where they describe their Community of Inquiry model or "CoI" (see 2.4.6.1) explaining that for CMC to be effective there needs to be: 1) teaching presence, 2) social presence, and 3) cognitive presence (88). This model has also generated research studies in an attempt to test it, the most relevant will be discussed below. The following section discusses the benefits of using text-based AoD forums and considerations that might be relevant for teachers who contemplate implementing AoD in their classrooms.

2.4.3.3 Benefits of Using Text-based AoD

Freeman & Capper, (1999) found that "anonymous asynchronous web based role simulation without the web ... is simply not possible", and discussed that this "simulation enhanced student learning and helped prepare students for effective technology usage in the workplace". They added that the "anonymity appeared to allow students to challenge their own stereotypic views of gender and race as well as their views about the content of securities markets regulation". The authors also commented that the sole simulation "appears to show greatest potential when the

subject matter has an inherent conflict or ambiguity”. Anonymity is discussed later as it is not recommended in classrooms.

Beaudin, (1999) indicated four techniques in order of importance as rated by online instructors for maintaining AoD on topic:

- 1) “Carefully design questions that specifically elicit on-topic discussion”, further highlighting that “online instructors should be encouraged to develop questions that are clear, concise, and directly relate to the purpose of posing the question”, 2) “provide guidelines to help online learners prepare on-topic responses” and pointed out that these guidelines serve as information organizers which in turn foster learning and retention, 3) “reword the original question when responses are going in the wrong direction” explaining that this technique cannot be planned with anticipation but should be overcome by improving technique number one, and finally 4) “provide discussion summary on a regular basis” which develop lower level cognitive processes and prepare the learners for higher level cognitive processes. Noteworthy from this article is that what online instructors recommended and what they actually used to keep learners on topic was significantly different, this could mean that instructors need to develop capabilities that would allow them to actually do what they recommend. Beaudin, (1999: 51)

Swan, (2001) also relates his research on the Col and found that there are three general factors that heavily influenced satisfaction and perceived learning by learners: a) clarity of design, b) interaction with instructors, and c) active discussion among course participants. The first factor “clarity of design” echoes the views of Beaudin, (1999) above.

Aviv et al. (2003), researched how structured “ALN” (Asynchronous Learning Networks) -a 3-month long online seminar with structured commitment, goals, schedules, a reward mechanism, and model for working with content-, and non-structured ALN, -a 3-month long online seminar without commitments, goals, schedule, reward mechanisms or structured steps- assisted in constructing knowledge.

The authors contributed to the field by reporting that in “structured ALN (Asynchronous Learning Networks), the knowledge construction process reached a very high phase of critical thinking and developed cohesive cliques” explaining that the role of the instructor was limited or had little power. On the contrary, in non-structured ALN, where instructors led or controlled more being the center of activity “the knowledge construction process reached a low phase of cognitive activity; few cliques were constructed; most of the students took on the passive role of teacher-followers”. Data from this qualitative article was considered as important for the design of AoD

forums for this study, although their focus was knowledge construction, they used the Col model for CMC and Teaching Presence was important, they found that “Social Presence” was more useful for reaching higher cognitive activity. The value for this research resides in the way tasks were structured and the effects they had.

Meyer, (2003) compared face-to-face (F2F) discussions against AoD forums and reported that although there were advantages to both, participants “most frequently noted that using threaded discussions increased the amount of time they spent on class objectives and that they appreciated the extra time for reflection on course issues”. On the other hand, they also noted that the F2F “format also had value as a result of its immediacy and energy”. This article highlights the importance of using ACMC together with either SCMC or F2F interaction as they complement each other.

A relevant remark from the above study is that “some students found one mode a better “fit” with their preferred learning mode”. This might mean that the effectiveness of F2F, synchronous or AoD forums could depend largely on the participants learning mode rather than on the affordances or constraints of each mode, and if we consider how technology has slowly integrated into society, this might represent a future change in learning modes as well and a more integrative view of using synchronous and asynchronous modes of interaction rather than just one. Beginning-of-class surveys on learning preferences could assist in selecting the best mode of interaction for any particular group of learners.

A study by Vonderwell (2003), explored the ACMC perspective and experiences of undergraduate learners. She explains that many learners felt awkward initiating interaction with people they did not know, she noticed that learners posting anonymously felt more freedom to ask. Conversely, “many felt bad that their posts or questions were left unanswered by their classmates”. Also, there was no interaction (one on one) with the instructor. Learners reported that interaction felt less personal and reported delayed feedback. She also reports that “instructions should be very clear, and even like that there will be misunderstandings as someone will read things incorrectly”.

Woods & Ebersole, (2003: 100) stated that online instructors “try to foster a sense of community among learners by incorporating personal, non-subject-matter-specific discussion boards, often referred to as discussion “folders,” “rooms,” or “forums””, arguing that social bonds created have cognitive and socio-affective benefits in learning activities. Their results also “support the idea that the use of certain non-subject-matter-specific discussion folders as gathering places in online courses can positively contribute to an online learner’s sense of connectedness with others.” For the case of working professionals, they suggest that they “are not as interested in taking the time to discuss issues not related directly to the course” and that for “these students, online activity is

purposeful and task oriented.” This last comment was particularly interesting for this research study since participants are pre-service teachers, some of them are already working and those who are not are looking for opportunities to begin working.

In their study, Mazzolini & Maddison, (2003) found that “the more instructors posted to discussion forums, the shorter were the discussion threads on average”. Relevant to the purpose of fostering interaction, they also added that “Instructors who were active in initiating discussion threads did not appear to stimulate more discussion and may actually have limited the amount of discussion (with the more advanced students) and the length of discussion threads (with all students)”. They suggest that students “possibly react more positively to questions posed by fellow students”. On the other hand, “instructors who play only a minimal part in online discussion forums are unlikely to be very popular with students, even if the discussions on their forums appear to be thriving”, and accordingly do not recommend instructors to disappear completely from the discussions. These findings have implications for the type of teacher presence that task designers in AoD forums should show. Not posting too much but not disappearing completely seems to be the most beneficial.

Hwang & Wang, (2004) studied learning time patterns in asynchronous learning environments and their findings are reported in three parts. “The first finding is that the more diligent learners were, the higher the quality and quantity of their interaction”, intensive reading was an important factor in this first finding. The second finding of the authors is “that learners whose learning time intensity was mainly located in the early period of the course and whose interaction content included many complaints were suspected to be possible dropouts”; this is useful information for instructors using asynchronous learning environments so establishing a space for complaints can help identify them sooner and find strategies to help them. The third finding was that “learners whose learning time intensity was mainly located in the later period had achievements that were significantly different from those of the regular periodical reading learners whose learning time intensity was distributed in all periods of the course”.

Furthermore, the authors concluded that the more reading participants did, or the more diligent they were, the more active their interactions were during discussions. They recommend instructors to guide participants through well scheduled programs, to encourage self-discipline on regular online reading, to establish rules where participants cannot advance until they have submitted their assignments, to use systems that display reading times compared to others to motivate them to read more and at the same time use that information to take pedagogical decisions.

Wu & Hiltz, (2004) state that discussions “improved students’ perceived learning in the “mixed mode,” meaning classes that meet face-to-face and also require additional asynchronous online discussions”. They indicated that variations “among instructors or courses are associated with differences in perceptions of student motivation, enjoyment, and learning from online discussion” and that previous experiences with online courses did not have a relationship with perceived learning from AoD.

Altun (2005), conducted a study where learners found the integration of Computer Mediated Communication tools for learning English beneficial. He particularly states that “students generally tended to develop positive attitudes toward using asynchronous communication tools in their language teaching program” as well as towards communicating with classmates with whom they usually did not. They question however, why to interact online when the instructor is physically available which contrasts with the views of Wu & Hiltz, (2004) in the preceding paragraph.

Thompson, (2006) compiled a set of best practices for instructors using AoD drawing on several authors. The author quotes Black (2005) stating the need for participation from learners and advising instructors to be very specific in their expectations providing an example where students leave their participation for the last minute before due date, thus reducing the quality of interaction. The same author recommends specific guidelines, checklists, rubrics for acceptable responses, modelling, well-designed open-ended questions and topics, requirement of specific connections to the readings, private addressing to students who are off-topic or inappropriate, summary of the discussions, and clear grade points or percentage assigned to their contributions.

Thompson quotes Ambrose (2001) suggesting that students must be made “feel welcome and safe”. Stating also that instructors must provide clear instructions of where and how to post, not reply to every comment, ensure the direction of the discussion, intervene only to help students explore topics more deeply, summarize effectively, and assess learners from their contributions. In addition, Thompson discusses the works of several authors giving recommendations on how to effectively generate AoD. For instance, Klemm (1998) suggests that for turning passive learners (or lurkers) into active learners, one must make participations mandatory, the activities interesting, require posts that are not simply opinions, structure the activities, define clear objectives, and include peer grading.

Moreover, Thompson cites Brown (2002), who recommends using online discussions for building a community, to relate AoD to the class, to structure the discussions, define roles for different learners, clarify the value of the discussion in terms of class points, eliminate opinion posts, and to keep an AoD that is only for fun. The author also discusses the work of Bolloju and Davidson

(2003), who recommend providing illustrative guidance, communicating expectations and rules, initiating a few threads, monitoring, and controlling participation patterns, praising good posts and cautioning off-topic or bad ones, allowing occasional anonymous postings, and summarizing discussions. In addition, the author cites Hammond (2005) among others providing valuable advice for designing AoD tasks.

In 2011, Machado compared discussion forums where learners interacted versus private blogs where they could post their ideas or elaborations on any given topic without interaction. She found that learners preferred discussion forums, that there was no significant difference between the posts of females versus males and that the marks and opportunity for social interaction very likely contributed in learner active participation. The author analysed learner reflection in three manners: a) reflection-on-action or retrospective, b) reflection-in-action or contemporary, and c) reflection-for action or anticipatory finding that males posted more in contemporary reflections. She mentioned that those participants who posted more in their private blogs, posted less in discussion forums and vice-versa. This could indicate that it was just a matter of preference.

Hamann et al., (2011) argued that “the effectiveness of online discussions can be conditioned—even compromised—by such factors as group size, gender composition, and differences in the prior academic achievement of participants”. They add that literature reports smaller groups (about 5 participants) fostering more and less repetitive interaction while increasing higher-order critical thinking and that students with lower academic achievement who are more inclined to passive learning make the largest gains compared to higher GPA cohorts. In terms of gender composition, they report that “gender-balanced groups produce much more interaction between participants”.

Hew & Cheung, (2012) conducted a comprehensive examination of literature on asynchronous online discussions in K-12 and higher education contexts from the year 1992 to the end of January 2012 excluding non-empirical descriptions of online discussions, opinion papers, and non-educational forums such as political discussions, and patient support groups finding more than 110 articles. They then categorized them until reaching saturation and presented their findings. Their most relevant findings are discussed below.

The authors found the following as factors limiting student contributions in AoD forums: a) learners not seeing the need for online discussion, b) behaviour/practice of instructor or participants (tone of postings – threatening, pontification on the part of others, lack of peer response, lack of instructor response, single-pass strategy), c) Personality traits (e.g., low degrees of curiosity, extraversion, agreeableness, openness), d) Difficulty in keeping up with the discussion, e) Not knowing what to contribute, f) Lack of critical thinking skills, g) Being content in

merely answering queries (low-level knowledge construction), h) Technical aspects (e.g., usability issues), i) Lack of time, and j) Risk of being misunderstood (see Appendix CC). After discussing the above factors, the authors presented strategies to help mitigate them (see Appendix Z.)

Hew & Cheung, (2012: 49) also discuss five pedagogical problems or, “strategy dilemmas”, that they consider “educators might encounter: (a) use of grades or marks, (b) use of number of posting guideline and posting deadlines, (c) use of message labels or sentence openers (online scaffolds), (d) extending the duration of the online discussion, and (e) instructor-facilitation.” Each of these dilemmas were explored individually.

For the first dilemma, they found that simply giving marks to increase contribution may not be the best strategy. Instead, they suggested the use of rubrics designed considering the objective of the discussion and peer assessment with flexibility from the instruction to change marks according to observation and peer assessment. Nonetheless, they mentioned that further research was needed to understand the effectiveness of these suggestions.

For the second dilemma, they found that indicating the number of times to post made the learners stop posting once they reached the required number that that the quality of the posts suffered as well. In regard to deadlines, they found that participants tended to post almost at the deadline with limited interaction, this meant that deadlines were both “a participation motivator and a discussion inhibitor” because they did promote participation -for their grade- but they stifled dialog. They explored the idea of multiple deadlines per discussion as a viable strategy but mentioned that more research on this topic was needed to understand their effects. They recommended alternative forms of incentives such as a “rewards program that combines quantitative and qualitative measures to motivate student contribution”, where students would obtain points and access to extra class material only available through those points. When this system was applied, students continued participating even after the reward system was withdrawn. As a last suggestion, they mention being explicit with expectations as to what each one of their posts should entail instead of only guidelines of a number of posts.

As for the third dilemma, they reported that message labels or categories where learners had to “allocate” their messages disrupted students’ ideas and stunted the flow of discussions, particularly labels with negative connotations such as critique. They mentioned finding other labels that did not have negative connotations although commenting that participants usually labelled their posts erroneously. They suggested using the Socratic questioning counterarguing that it was a mere conjecture and that further research was needed in this regard.

For the fourth dilemma, they did not find a correlation between longer time allocated for AoD and number, quality, or higher-level knowledge constructions from the postings. They found that

participants took an average of two hours to prepare and post their ideas and argued it was similar to F2F time. They speculate that it is more a matter of prioritization where work or family issues were considered as more urgent. The authors recommended creating a sense of urgency either through marks or using the discussions as complements to other parts of the course.

The last dilemma, use of instructor facilitation, shows that instructor led discussions may entail too much time and energy from them and because students see them as the “experts”, they inhibit student participation and voice. In discussions where the instructor replied to almost everyone, critical thinking was exhibited as low, and students favoured replying to the instructor rather than to their peers, thus undermining interaction. They recommended peer facilitation, performed either by their own classmates (the same age) or by older peers, students from other semesters or teaching assistants usually referred to as cross-age facilitation. The latter was considered by students to be similar to instructor led, and they preferred, participated more, for longer times, and with better quality in same-age facilitation. They report that instructor led facilitation was preferred for organizational matters, for keeping the discussion on topic, for mediating conflicts, and for explaining concepts that were more complex and required expert knowledge. To finish, Hew & Cheung, (2012) analyse the integration of audio-based online discussions which will be discussed in 2.4.5.

In 2013, Harmon et al., found “positive net effects on learning outcomes of using Facebook as a discussion tool” commenting that learners had to be taught how to use it for it to work. Hawkins et al., (2013) examined the relationship between students’ perceptions of teacher–student interaction and academic performance in an asynchronous, self-paced environment, they subdivided the quality of interaction in three constructs, feedback, procedural, and social interaction; they discovered that “the quality and frequency of interaction resulted in an increased likelihood of course completion but had minimal influence on grade awarded”. According to these authors, designing tasks in a way that everyone is ensured interaction can increase course completion rate. This was considered for designing tasks in this research.

Lin, (2014) sought for an empirical link between CMC and SLA finding that “literature on the effectiveness of CMC in SLA is unable to conclusively support its benefits”. The author reported that “studies show a positive and medium effect from CMC interventions” and that “communication taking place either asynchronously or synchronously does not seem to have a differential effect on SLA” adding that asynchronous communication represents a good alternative or substitute when the synchronous mode is not available.

The above author implied that it was “low proficiency learners in particular who performed better than the high proficiency learners in this environment, suggesting that the unique features

affordable in online environments do have the potential to remedy some learners' shortcomings, such as their low language proficiency". Lin further summarized that "learners' proficiency level, interlocutor type, research context and task type were found to be variables that would significantly moderate the effectiveness of interaction in such an environment" but speculated that the small sample of some categories made these results tentative.

A study by Fehrman & Watson in 2020, conducted a systematic review of AoD in online higher education analysing data from 2015 to 2019 obtaining 35 articles which compiled best practices and relevant findings for educators to be better informed when deciding to use AoD in their classes. The documents analysed were fifty four percent quantitative and thirty seven percent mixed methodologies. They start by explaining that AoD forums must provide community, instruction, and participation for students to be beneficial.

The same authors also cite Decker & Beltran, 2016 & Vaughan, Cleaveland-Innes, & Garrison, (2013) to explain that student-student interaction assists in increasing comprehension of course content and new perspectives while instructor-student interaction leads to more educational and meaningful results. They elaborate that AoDs provide opportunities for student interaction but that the opportunity alone is not enough, and that students working alone in asynchronous conditions obtained better results than those working collaboratively (Decker & Beltran, 2016 & Peterson and Roseth, 2016). They criticise that "there seems to be little agreement about what the goal of student-student interaction should be, and how to best accomplish those goals in an AOD environment."

Furthermore, the authors make the case that more active instructors led to more student postings in small classes but had no effect on larger classes. Similar to Hew & Cheung, (2012), they reported that timely responses to student questions and frequent feedback were important to get students to participate and improve their motivation, but this was extremely time-consuming for instructors. They also found that structured AoD design was more beneficial than unstructured and that "having a clear design and purpose, with clear expectations of the roles of instructors and students increased learning outcomes in AODs (Steen, 2015)". Coffin & Hewings, (2005) concur that "structured tasks may result in increased student interaction".

The same Fehrman & Watson (2020) also stated that expectations regarding performance length and depth of posts by students was important and could be guided by using Bloom's revised taxonomy through a variety of questions and using authentic problems. They counterargue the above findings indicating that the idea that structured AoD work better was not conclusive in one of the studies adding that "with small groups, the structured AODs seemed to work better, while larger groups seemed to do better with unstructured AODs (Peddibhotla & Jani, 2019)". The

authors cautioned instructors not to create AoD that were perceived as too long compared to their educational value because student would just complete the assignment and not focus on learning.

Furthermore, the same authors found grading as a continuing theme (as explored by Hew & Cheung in 2012) and reported that “voluntary posts were not conducive to learning” and that “students were primarily motivated to post in AODs by the grades they received”, because of this they prioritized grades over learning not doing work that students considered was not necessary to meet forum requirements. They concluded that assessment objectives must be clearly communicated to the participants and literature suggests the most common tool to do this is rubrics. Their implementation dramatically reduced complaints on AoD assessment, reduced instructor grading time and focused student attention to the content, frequency and quality expected by their posts (McKinney, 2018). Rubrics were useful for communicating the purpose, expectations, instructions on how to use them and on how to collaborate in AoD, aspects which “all lead to improved student engagement and outcomes (Tibi, 2018)”.

Fehrman & Watson, (2020) also explored group size and cited Afify (2019) who “indicated that small (<10) and medium (10–20) groups increased critical thinking more than large (>20) groups with AODs” but another study suggested that larger groups generated more participation per student. They state that group size is not a “widely studied aspect of AODs” and that literature to date is not conclusive.

The same authors cited Cho et al. (2016) who “examined three different online classes with no AODs, AODs that were student-only, and AODs that had instructor presence.” They reported that student perception of the instructor did not change in the three cases, time spent on topic by students was roughly the same so AoD forums do not necessarily add workload, AoD did not improve teacher effectiveness or learning outcomes but reported that class cohesion was higher in the courses with AoDs.

Moreover, Fehrman & Watson, (2020: 8) compared Social Media to Learning Management Systems (LMS) such as Blackboard or Moodle and reported that Social Media applications such as Facebook and WeChat generated more posts but of a lower degree of depth in terms of the taxonomy of Bloom whereas LMS were more beneficial for knowledge construction but had fewer posts. They presented another study where individual learning needs affected preference for any given tool. The authors add that “Despite the wide-spread nature of AODs, there are still several challenges reported” for both students and instructors.

For the case of learners, learning in AoD appears to be rather difficult, literature reports that they are time consuming, and those with requirements for “for too many lengthy posts can make

students feel disconnected and overwhelmed”. Similarly, when they thought nobody read their contributions they felt “discouraged and unmotivated”. They contributed further mentioning that students need to be taught how to build knowledge in AoD to achieve instructor goals and that this can lead to anxiety about participating.

In the case of instructors, literature states that using AoD can be a very time-consuming activity and they care needs to be taken when using them as they must be directly linked to course objectives, particularly if a mark is assigned to them. Research points out that instructors need to learn how to construct knowledge in AoD and how to model this knowledge construction for students to learn. In addition, they need training in recognizing when to prompt learners and when to provide answers, how to develop interpersonal communication in AoD where students are active learners rather than passive recipients of knowledge. To finish Fehrman & Watson observe that there are not many studies with alternatives to text-based AoD forums and that there is a need to develop “a more standard way to measure items like efficacy and learning in AOD environments”.

Chen, Lo, and Hu, (2020) explored message responsiveness in AoDs and found that “a message that either expressed disagreement, included a correct or incorrect idea, or asked a question”, and that users who replied earlier in the discussion were more likely to receive a reply to their contributions. Douglas et al., (2020) expanded this idea by reporting that confident and experienced students who made meaningful posts “may have influenced the less experienced to question whether they could contribute as meaningfully” and thus deter their contributions.

Carr, (2020) explored alternatives to AoD forums with teacher candidates, finding that they showed “preference toward the three alternative AODB platforms including Flipgrid, Video-response, and BookSnap over traditional AODB”. Additionally, “when evaluating for enhancing creativity, understanding, student voice, and usefulness participants preferred Flipgrid”. Teacher Candidates chose “alternative platforms over traditional because they enabled them to demonstrate their understanding (32%), be more creative (37%), or were considered more fun (31%), easy (28%) or quick (15%)” than traditional asynchronous online discussion forums.

Farrow, Moore and Gasevic, (2021) investigated assigning the “expert role” to students in discussion forums and found that the “contributions made while the student was in the ‘expert’ role scored significantly higher” in “cognitive presence and cognitive engagement, from the Community of Inquiry and the ICAP frameworks” highlighting that this was sustained regardless of whether they were assigned the role early or later in the discussion or of the student order in which they were assigned the role. The authors concluded that instructors “should feel confident in assigning complex roles and rotating them between students”.

James James, Douglas, Earwaker, & Mather, (2022) explored perceptions of seventy-eight students focusing “on the positive and negative learning practices and outcomes during online discussions”. After categorizing in themes, coding, and analysing the data, they identified seven opportunities to design engaging, dynamic and fit-for-purpose discussion boards or forums which are described next:

1. Effective online discussion provides consecutive opportunities to reinforce and apply knowledge. Students are systematically taught critical thinking. Subsequently, students ask questions of each other providing timely feedback on their input with educators guiding discussions and responses. This back-and-forth conversation contrasts with being lectured to, enabling scaffolded learning. We also envisage potential for a reduced tendency to plagiarise as educators and students interact building connections whilst offering alternatives experiences. This is evident from our literature review and discussion resulting from the original work of Vygotsky (1978).
2. Student posts are more analytical as they work through, draft and edit the discussion material before posting. Active learning which is inherent in discussion boards provides a platform (online space) upon which to practice unit and industry skills. Independence in thinking learnt during discussion, using discipline-specific terminology, which can be transferred and applied to work environments. Similarly, scaffolding of learning can impact upon and target the achievement of graduate outcomes.
3. Online discussion supports and facilitates active student-centred learning and can enable teaching strategies for multiple learning styles. Effective learners can see how they may assist in a mentoring or teaching capacity. This fits the response to utilise student facilitation to enhance peer learning and student understanding (Seo, 2007). This skill can be transferred to work environments as online discussion targets the development of self-directed learning skills.
4. Less confident students are exposed to the learning processes of effective learners, thus encouraging engagement, and learning from each other. This is in keeping with the work of Hall (2015) as discussion boards provide a virtual site for student collaboration. Students are enabled to explore their own propositions, promoting practices consistent with skill development as life-long learners.
5. Opportunities arise for harnessing student and educator diversity. This provides more nuanced online conversation, leading to fresh ways of thinking about our teaching, assessment strategies and unit content.

6. There are assessment decisions to be made in parallel with the implications discussed above. For example, the focus of learning, student numbers and size of per discussion group and number of facilitators will influence the type of assessment effectively implemented. Comprehensive marking rubrics have a significant role with the criteria clearly communicated to students.

7. Through experience and outcomes of this study we also identify some challenges which can be seen as opportunities to be addressed. We recognise that all students are not self-directed. Some students may not undertake the prescribed learning activities before commencing discussions. This behaviour might lead to reduced levels of participation and engagement. These students may subsequently fall behind the unit schedule and be at-risk of failure. In contrast, students that are well prepared may feel that they are carrying those that are unprepared. Some students may view discussion as simply more homework, leading to an extra workload rather than an effective learning tool. This perception may be linked to previous negative experiences. James et al., (2022: 13)

Schultz, and Sandidge, (2022: 24) contend that “key ways that instructors structured discussions and interacted with them provided the cognitive presence and social presence that students desired from discussion boards”. They authors point out that when analysing data two key themes emerged. “The first was that according to students' perception, learning involves asking questions; this theme is strongly confirmed in research (Hunkins, 1995; Morgan & Saxton, 2006). Students need clear opportunities to ask questions, and they need to have their questions answered in a timely manner”. The timely feedback was raised in previous studies with instructors complaining about requiring too much time and energy to answer to all.

The second theme was that there is great power in student choice; student engagement and perceived relevance of the material increased with choice. Students valued choice in readings and prompts, choice in how they interacted with the discussions, and choice in how they earned their grade in the discussion.” Although, after each of those factors, the authors provide a series of suggestions on how to tackle them; of particular interest is that to counteract the risk of being misunderstood, they suggest using audio-based discussions.

2.4.3.4 Constraints of Using AoD in the Classroom

An example of CoI studies is the one by Anderson et al., (2001) who takes one part of the CoI, the “teaching presence”, and argues that there is a difference in the quality of teaching presence that can be perceived in a discussion forum between instructors who are trained in designing forums and those who are not, including moderators -usually other students who moderate discussion forums-. Those who are not trained may post more, but the quality of the teaching presence is better in those who are trained or prepared in both the CoI model and their field of study. They

contend that using the phrase “teaching presence” instead of teacher presence is better precisely because sometimes there are learners (not teachers) who act as moderators in some AoD forums.

Pawan et al., (2003) used the five phase interaction analysis model by Anderson et al., (1997) and found that “the discussions centred on Phase 2 (Exploration; 66%) , with little Phase 3 (Integration; 11%) and no Phase 4 (Resolution) at all.” In other words, “the participants were primarily sharing information and brainstorming their own ideas in relation to the issues, problems, and questions posed by instructors or the assigned student discussion facilitator.” They also mentioned that participants were not interacting with others replying to them but rather only developed the topic asked and though they stayed in topic, they developed it in a more monological manner; this is relevant for this study since, as the same authors state “Discussions do not automatically become interactive and collaborative simply by virtue of being in an anytime/anywhere asynchronous medium”. This implies that participants need to be told or taught about the purpose and uses of forums before starting so that interaction can occur. Such lack of replies was considered for the design of the AoDs in this study.

Freeman & Bamford, (2004) conducted a study on anonymity and reported that “Some undesirable behaviour was evident, including posting as others' identities to harm or denigrate another student's opinion”, and when given the option, ninety percent did not post anonymously. Because of this, they recommend clarifying expectations regarding what is undesirable behaviour on AoD forums. Anonymity was not considered as a viable option for this study.

Burton, Mooney and Southard., (2014) claimed that asynchronous online “discussion boards often lack rich and dynamic dialogue, and instead serve as a field of obligatory discourse, hasty postings, and repetitive content.” For such reason, they proposed an “activity-based discussion exercise, known as the “suspense model”” to promote student engagement, it basically presented a task and learners had to carry it out without having all the information which would be disclosed as they progressed through the activity. Their results show that students engaged faster and more thoroughly using this model and that their perceptions towards this model were favourable compared with the traditional model of giving all the information from the start.

2.4.3.5 The Problem with Analyzing AoD Contributions.

The work by Hew & Cheung, (2003) studied seven different models for evaluating AoD forums and found several drawbacks with them, they posit that the first one is “the unreliable use of the unit of analysis” (described by the authors as a discrete element of text that is observed, recorded, and thereafter considered data)”. They state that one way to analyse them is “to take the learners’ online message postings (this being the unit of analysis) and analyse each posting in turn, with reference to the threads of discussion topics”, but with the problem with that is that

“online postings usually contain more than one idea or thought”. Another manner is “thematic unit”, for which the authors cite Budd, Thorp, and Donohue (1967) to define it as “a single thought unit or idea unit that conveys a single item of information extracted from a segment of content”, according to the authors this unit of analysis “resist reliable and consistent identification”. The last unit presented was “to combine the flexibility of the thematic unit with the identification attributes of a syntactical unit (e.g., a sentence, phrase or paragraph).” The authors conclude that “despite the fact that many units of analysis have been experimented with, none has been sufficiently reliable, valid and efficient to achieve pre-eminence”.

The same authors contend that a second drawback is “high degree of subjectivity involved in discriminating the data and putting them into the correct categories” and thus becomes “difficult to achieve high reliability.” For the latter, they proposed using “inter-coder reliability” defined as “the extent to which different coders, each coding the same content, come to the same coding decisions” (Rourke, Anderson, Garrison & Archer, 2001). They recommended always doing a sample exercise before starting. Hew & Cheung, (2003) present a third and last drawback as being the “inability of these models to evaluate the interactions, cognitive processes, and roles of “passive learners””.

All these studies contributed to understanding the effects that text-based AoD forums have on the educational setting, and particularly focus on results that can be used to design effective text-based AoD. The effects on voice-based AoD forums have not been researched as extensively as text-based, and many of the results shown from text-based literature have not been proven to be true for voice-based AoD. However, there seems to be a connection between text-based and voice-based AoD forums, this link is described in the following section.

2.4.4 Asynchronous Online Discussions: From Writing to Speaking

The CEFR (2018: 68), considers speaking and writing in a single category, they are productive activities and it states that they “have an important function in many academic and professional fields (oral presentations, written studies and reports, etc.) and particular social value is attached to them”. It also mentions that writing and the articulateness and fluency in speaking are judged, particularly when speaking to an audience. Formal speaking and/or writing is not acquired naturally; it is a result of education and experience. It entails learning the conventions of the genre in question.

Hew & Cheung, (2012: 103) argued that AoD were mostly text-based at the time they wrote their book and although they represented a space for “less vocal or shy students to participate in online discussions,” they required reading, writing, and typing skills which acted as a barrier for those

with underdeveloped skills in that regard. Moreover, Polio & Lee, (2017), citing the work of (Belcher & Hirvela, 2008), stated that it “is accepted that oral and literacy skills are related in some way” and provided examples of this by citing previous works where researchers “found that nonliterate students had more difficulty recalling feedback from oral recasts and suggested that first language (L1) literacy skills may help learners process second languages”. They also quote Harklau (2002) who added that students learned how to spell words through written input but point out that the author “did not document how learning to write transferred to oral skills”.

Mendelson (2014), mentions that learners who use text-based chats have been compared to those who do not in regards to the development of their speaking skills. He states that the published studies by Abrams (2003), Beauvois (1997), and Payne and Whitney (2003), show that in all the cases students who received chat-based instruction achieved gains in oral development that were equal to or greater than those of students in control conditions. He also explained that this seems to support the premise of transfer between chatting and speaking. However, the studies do not explain how it happens or how to create activities aimed at specific educational goals. He mentions that “existing research can only vaguely suggest that in general chatting may be beneficial for speaking.”

The same author further draws on research by Payne and Whitney (2003), to establish that there is a decreased load on working memory in chat because it is not quite real-time and their posts remain available. He states that “They hypothesize that this decreased load on working memory facilitates the cognitive processing that leads to automaticity and fluency”. Payne and Whitney tested their hypothesis focusing on working memory and found a “significantly greater correlation between differences in working memory and differences in gains in oral proficiency in the control group than in the chat group. This means they improved their phonological memory apparently because of the decreased cognitive demands of chat”.

Finally, the results from text-based discussion forums that impact oral proficiency, pose the possibility that asynchronous activities through voice-based forums might have similar results since the most important characteristic, the decreased cognitive load, is also present and spoken production specifically is practiced. The following section will address the most significant findings from literature regarding the effect of voice-based AoD forums.

2.4.5 Asynchronous Online Discussion (AoD) Forums in Spoken Production

As discussed above, there are some possible benefits in oral production that come from engaging in online text discussion forums, a type of CMC, and analysing the effects that online voice discussions forums could have on the learning of a foreign language, specifically on spoken

production if designed the same way appears to be relevant for this field. There are several studies that address this issue although not all of them define how they understand spoken production. This is of interest for foreign language teachers such as the case of the participants of this research study who will become teachers of English.

An influential article on the topic of using voice recordings to explore the effects on spoken production was written by Skehan & Foster (1999), where 47 participants of intermediate level EFL classes who were videotaped and their recordings were later analysed. Although they did not use a voice-based discussion forum, this is one of the earliest works found where researchers give speaking tasks for participants to carry out, record them and then analyse such recordings. The authors presented three claims from their study.

The first was that “fluency was mainly affected by the degree of task structure”, the second was that “complexity was mainly affected by the conditions under which tasks were done, with this relating especially to the processing demands that they entailed”, and the third that “accuracy was affected by the interaction of task structure and the opportunity to engage in some degree of task preparation.” Adding to the latter that “both these conditions had to be met for there to be more accurate performance.”

Conversely, they found that “the immediacy of the need to process material in real time appeared to swamp any effects that might otherwise have been present”. This is relevant for this project since voice-based AoD forums allow for a slower version of interaction, participants have to interact in the way they would do in a synchronous conversation but have enough time to organize their thoughts, this could be seen as a benefit since it allows participants a safe space where to organize their thoughts; these forums can be designed as real interaction but occurring in slow motion, the tasks or interactions should push participants to actually having to communicate something and expecting a reply to it.

2.4.5.1 Benefits of Using Voice Based AoD

McIntosh et al. (2003), discuss two English for Academic Purposes (EAP) courses which incorporated a voice-based conferencing tool called Wimba that was used in a voice-based discussion forum. At the end, an evaluation survey was given to students to test learners’ reactions and determine effectiveness. Findings show enthusiasm and great peer to peer interaction although there was disappointment when no one replied to their posts, and some reported embarrassment from posting their voice recordings. They conclude that it is a viable option to enhance listening and speaking skills, though they do not explain what they mean by speaking. The problems reported by these authors are the timing of posting, technical difficulties,

unfamiliarity with the medium and improper set-up of hardware. Another issue with this article is that, as with many internet-based applications or pages, Wimba is no longer available.

In their study, Ozdener & Satar, (2008) state that consistent with literature, “learners who share the same native language use the target language more in computer-mediated communication than they do in classroom situations”. They make the case that it is “undesirable for computer-mediated communication to replace on-site language learning activities performed in the Classroom” but that it is also “undeniable fact that CMC could provide an exceptional context for the students with low proficiency and high foreign language anxiety levels to improve their language skills”. To finish, the authors contend that “CMC technologies will also create significant opportunities in cases where sufficient time cannot be allocated for communicative activities within the classroom due to limited teaching time”. This is of particular interest for this research since time for speaking practice within the classroom is limited.

Ranasinghe et al., (2010) studied, among other two aspects, the effect of a Voice based online forum, finding that participants expect to share knowledge and to be guided on how to do so, that it helps eliminate shyness, that it saves time, and it helps people who are physically distant. They also found that most learners prefer learning from a tutor rather than reading instructions.

Cheng et al., (2011), assessed the effectiveness of voluntary online discussion on course performance (through writing assessment grades, exam grades, and extra-credits) from two groups in an undergraduate introductory psychology course. Findings “showed that students who participated in the forum tended to have better performance in the course”, and that “reading posts on the forum, slightly improved exam performance”. The authors claim that their study presents “empirical support for the theoretical proposition that there is a facilitation effect of discussion forum participation on course performance” regardless of the time invested by instructors on the forums.

Grosbois, (2011) explored, in the context of a pre-service primary school teacher training programme in France studying English as L2, “the impact of distant written exchanges between Native Speakers (NS) and Non-Native Speakers (NNS) on the development of NNS L2 oral output” focusing on phonological nativisation. She defined nativisation in terms of the work Andersen (1983) who indicated that “In all the settings where the learner already has a language when he begins to acquire another, the linguistic features of his earlier-acquired language(s) are relevant to the outcome of his acquisition of the additional language.” The author found that the “effects of phonological nativisation are stronger when oral output is based on authentic written input than when oral output is based on authentic oral input” which makes sense because the

participants can listen to the pronunciations and emulate rather than read without having a model to follow in terms of pronunciation, thus promoting nativisation.

A study by Pop et al., (2011) compared the effect on motivation of two different approaches to discussion, one in F2F classes and the other asynchronously through two Web 2.0 voice tools called Voxopop (VoP) and Voice Thread (VT). For the asynchronous tools they had to contribute to an audience outside their classroom which was thought by the authors that would increase students engagement, motivation and would results in an improved spoken performance. Results show that there was engagement and unintendedly confidence building, they state that “there was an overwhelmingly positive response to the virtual asynchronous speaking, students becoming excited and proud to see themselves on the Internet”.

The authors also found that features of students’ “personalities, learning and response pace, motivation, and language proficiency that lead to individual inequality to speak up in class or in groups were bypassed in the digital environment”, claiming that anxiety of speaking was significantly reduced. Students appreciated VoP’s feature of being able to re-record before posting. They conclude that “having an audience beyond the classroom walls can have significant benefits for adult EFL students such as enhanced motivation, extension of students’ talking time as well as engagement in memorable learning experiences.” They indicate in their final remarks that further quantitative studies are needed to substantiate their qualitative findings.

Moreover, Poza (2011), researched the effect of a voice discussion forum environment called (Wimba) on the anxiety of learners when practicing oral production in a foreign language finding that there is a “strong potential for the reduction of anxiety associated with the Wimba environment” because it eliminates the immediate responses needed by face-to-face classes and it gives students the opportunity to prepare their contributions. The study also found that there was “increased risk-taking, in terms of the quantity and quality of the output produced by students, and reduced fear of negative evaluation” in this asynchronous tool.

In their book, Hew & Cheung, (2012: 103) also conducted a literature review on asynchronous audio discussions. Their analysis “suggested that using asynchronous audio discussion can increase student engagement and motivation during the learning process” but that these findings are based on “conjectures, rather than empirical findings”. They explain that there were few empirical studies reporting only seven empirical studies and conclude that the data found “speaks to the need for more research in the area”.

Nicolas-Pino (2013), explored the benefits of asynchronous computer mediated communication for speaking in learners of Spanish through an asynchronous tool named MyBrainshark and found that “ACMC oral practices can be beneficial in developing speaking aspects in lower-proficiency

language learners". He explained that the tool had "characteristics that can potentially promote linguistic development" noting that there is no research on the effect over post-beginner and higher proficiency learners. This last comment feeds into this research as subjects are expected to have a B2+ English level in terms of the CEFR which is not lower proficiency.

Polat et al., (2013) researched "L2 attainment in asynchronous online environments, specifically possible relationships among anonymity, L2 motivation, participation in discussions, quality of L2 production, and success in L2 vocabulary learning" comparing anonymous versus non-anonymous participation in AoD. They worked with 87 Spanish as FL high school students in the United States using pre and post tests, a vocabulary recognition test, and e-documents from the AoD forums. The authors explored four levels of motivation, external, introjected, identified, and integrated regulation and define them as:

external regulation (doing a task due to externally imposed rewards or punishments) to introjection (engaging in a task due to the attainment of self-esteem or ego enhancement, or avoidance of guilt or anxiety) and to identification (identifying with the personal importance of the task) and integration (doing a task because it emanates from the self). (Polat et al., 2013: 61)

They report that "that students who participated in the asynchronous discussions received significantly higher scores on the post-test than those who did not." For the case of participation, "nonanonymous forums may have a comparative advantage over anonymous ones for learners with high levels of introjected regulation, whereas for learners with high levels of identified regulation, both forums are advantageous" adding that "introjected regulation was the only significant predictor of success in learning L2 vocabulary". Their last finding claims that "nonanonymous forums seem to generate higher quality L2 production than anonymous ones". This study was essential for deciding on the design element of anonymity vs non-anonymity to be used in the AoD used in this research study.

Mok, (2013) studied the effectiveness of using AoD on 24 L2 English student teachers from Hong Kong for developing Teacher Language Awareness (TLA). She discussed that a major challenge is to help teacher students to connect declarative knowledge of a language to its procedural dimension, or how teachers use their knowledge in pedagogical practice. The researcher found that students "reflections showed a strong tendency to move from the declarative to the procedural dimension of TLA". The reflections generated in AoD forums can be an effective way to help pre-service teachers make pedagogical connections more efficiently, such as the impact of using voice-based AoD forums for the development of spoken production.

Wilches (2014), sought to explore learner perception of the benefits of voice tools on spoken performance. Learners' perceptions state that they are beneficial for raising self-awareness, self-correction patterns and for enhancing pronunciation, intonation, fluency, and accuracy. She elucidates that ACMC through voice activities create an anxiety free atmosphere where learners can take more time to try to include grammatical and lexical items studied in class into their voice posts. She quotes Abrams, (2003) and Blake, (2009) "who reported that increased attention to grammar structures, use of lexicon and students' construction of ideas can be achieved through CMC tools".

Wilches (2014), also mentions that when working with the "voice-based tasks outside class, students have more time to check the phonetic transcription of difficult words, practice repeating a particular sound several times before posting, and especially, listen to themselves". Additionally, she presents the raising of self-awareness and self-correction of speech patterns, the extra practice of language features such as pronunciation, fluency, intonation, and accuracy as beneficial for spoken production although she presents the reduced number of participants (nine adult beginning-level EFL students) in her study as a limitation of her work.

Wilches, (2014), states that asynchronous voice activities can provide for more and sustained speaking practice. This could have an effect on fluency in two ways, as explained by the CEFR (2018: 139) "firstly in a holistic way, representing the speaker's ability to articulate a (possibly complex) message. ... implies an ability to talk at length, with appropriate things to say in a wide range of contexts". Although many studies favour a second view, a more technical interpretation which explains that "talking at length implies a lack of distraction through breaks and long pauses in the flow of speech".

Wilches, (2014) also points out some difficulties that arise when working with asynchronous tools, she quotes Yaneske and Oates (2010), explaining that "Learners may have problems accessing a platform, or meeting the technical requirements to run a program, as well as recording, editing, interacting with the tool, or personalizing the interface". She further remarks that these issues may hinder learner participation in asynchronous forums and tasks and might give rise to affective problems such as "drop in motivation, embarrassment or lack of interest". Additionally, Yaneske & Oates, (2010: 243) conclude that their findings are limited due to a small sample of 11 participants and that generalization is difficult because of that, adding that voice board (voice-based AoD forum) interaction can be beneficial for visually impaired students or for those looking to improve their listening and speaking skills.

Furthermore, Wilches states that another challenge when using ACMC tools for communicative tasks is the time it takes to provide individual feedback, particularly in large groups. She

elaborates that learners have more time to edit before posting but that “flexibility may delay conversations and feedback”, which in turn “may cause students to lose the motivation to participate”. Citing Qiyun and Huay, (2007), she also mentions that “the delay in the responses had a negative effect on the motivation to keep the conversation going”.

Qiyun and Huay, (2007: 282) also argue that “it seems that asynchronous online discussions are more appropriate for group characteristics that consist of a mix of introversion and extroversion, and submissiveness and dominance” but that these discussions would help more if they provided equal opportunities for everyone to participate. In this regard, Palloff & Pratt, (2007: 42) mention that the “expectation of participation differs significantly from the face-to-face classroom, where the discussion can be dominated by one or more extroverted students, giving an illusion that the class is engaged”. They argue that “the ability to think before responding and to comment whenever the student wishes helps create a level of participation and engagement that goes much deeper than a face-to-face discussion might”. These comments are relevant for this project, as AoD forum design contemplating giving everyone the opportunity to participate in the discussions can prevent monopolization of the conversations.

Abuseileek and Qatawneh, (2013), investigated “the effects of synchronous and asynchronous computer mediated communication (CMC) oral discussions on question types and strategies used by English as a Foreign Language (EFL) learners. Participants were assigned randomly to each of the groups (synchronous or asynchronous) and “were asked to make six conversation sessions using CMC modes over six weeks” which would be later transcribed and analysed for question types and strategies. The authors based their analysis on Littlewood’s (2006) interpretation of communicative competence and focused on two aspects of it: “discourse competence (having rules that govern the relationship among sentences to form a meaning whole) and strategic competence (the way the speaker manipulates language in order to fulfil communicative goals) related to question types and strategies”.

Results “showed that students who used the asynchronous CMC mode produced significantly more discourse functions related to question types and strategies than students in the other treatment condition (synchronous group)”. Similarly, ACMC fostered the asking of “a series of questions which need long answers and seek more details through examples, clarification, and extension, while the synchronous CMC mode supports question types and strategies which are based on short answers that are clear and unambiguous”. The authors clarify that their findings should be analysed cautiously because of three reasons:

First, the results are limited to two oral discussions (synchronous and asynchronous) in CMC modes. Second, the analysis included one major discourse function (question), and

its types and strategies. Another study may be conducted to investigate students' performance in synchronous and asynchronous CMC modes in different discourse functions. Third, the study was conducted on a limited sample over a limited period in a particular context. (Abuseileek & Qatawneh, 2013: 189)

Bakar et al., (2013) found a positive relationship between asynchronous discussion forums stating that "the use of an asynchronous online discussion forum such as MEDiF can help to improve speaking ability as well as discussion skills among the low proficiency language learners." They also contend that if "low proficiency learners are provided with more time to construct and develop their ideas or thoughts, they are able to develop and express more complex perspectives", the latter compared to real face-to-face discussions. However, they suggested providing learners "with sufficient preparation or training so that they are familiar with the online devices and would feel less awkward when utilizing the features of the online tools".

Ching & Hsu, (2015) explored "whether learners of different characteristics can benefit from" audio/video discussions commenting that this has not been investigated extensively. Their study examined whether gender influenced learner perception and preference on audio/video versus text-based discussions through a survey applied to thirty-six participants after a discussion activity. Results show a preference by females to use audio/video discussions and a feeling of strengthening their connections with peers compared to males. The authors add that "it is premature to assume the pedagogical affordances will meet the preferences and needs of all learners". Limitations to this study are that participants are thirty-six American teachers in K-12 schools, some technology coordinators and instructional designers studying a master's degree, a specific context that could impede replicability in other parts of the world.

In 2015, a study by Eslami, Mirzaei and Dini found that asynchronous computer mediated communication also improved pragmatic competence. In that same year, a study by Fukuta and Yamashita researched how "two types of cognitive demands (reasoning demand and dual-task demand) influenced the occurrence and orientation of attention in L2 oral production". They reached the conclusion that "The reasoning demand increased accuracy scores, but the dual-task demand did not" and suggested that tasks be made easier so that learners can focus on syntactic forms and improve L2 as a consequence. This last sentence is of special interest for this research as it fed information into the design of forums.

Ahmadian et al., (2015), explored "the combined effects of task-based careful online planning and the storyline structure of a task on second language performance (complexity, accuracy and fluency)." For this study, "Sixty intermediate EFL learners were randomly assigned to four groups" of 15 each where they were requested to "perform two tasks with different degrees of storyline

structure (structured and unstructured) under two different planning conditions (pressured online planning and careful online planning)". Findings revealed that "participants who performed the structured task under the careful online planning condition produced more complex, accurate and fluent language" whereas those who worked with unstructured tasks and under the pressured online planning "obtained the lowest scores in all three areas of oral production".

Skehan (2003) cited in Javad Ahmadian et al., (2015) indicated that there was "fairly convincing evidence that performing a structured task, i.e. a task which has a clear timeline or a story with a conventional and clearly identifiable beginning, middle and end, facilitates the production of more fluent and accurate language". Additionally, Ellis 2009 cited by the same authors revealed "that different types of planning, both pre-task and within-task, have beneficial effects on complexity, accuracy and fluency".

Buckingham & Alpaslan, (2017) explored promoting speaking proficiency and willingness to communicate (hereinafter WTC) through ACMC. They contend that "the use of technology for extramural schoolwork can potentially bring the spoken language into the homes of socially underprivileged families where parents have, to date, been unable to assist children with English language homework". They cite Abayl, 2001; Shenton & Pagett, 2007; Kirkgoz, 2011 to explain that "the integration of educational technology can have a positive impact on learner attitudes and motivation". Results showed that "progress in learners' WTC appeared to be a gradual phenomenon and significant changes in the WTC variables analysed in this study were only detectable from beginning to end and not on a monthly basis".

The authors mention that these types of activities appear "to support the development of reflection, autonomy and confidence, in that learners have control over how often they listen to, re-record and review the speaking texts". They cite Sanprasert, (2009) to point out that, in university contexts, "the use of CMC for pedagogical purposes appears to have a positive influence on students' perceptions of their degree of learning autonomy and confidence".

Dugartsyrenova and Sardegna (2017), conducted a study to find out the perceptions of students over the affordances of an asynchronous media called Voice-Thread (VT) to which "participants believed that VT supported their oral proficiency development through the provision of additional time and resources for independent planning, rehearsal, and controlled production of L2 forms". This could be an indication that there is a perceived benefit for the improvement of syntactical accuracy.

Herrera Díaz & González Miy, (2017) indicate that the Col framework has proved to be successful in several disciplines over the last decade but TEFL field is still scarce. They explored "the development of the oral skill in a Basic English online course, uncovering the relationship between

the community of inquiry framework (with its three forms of presence: teaching, cognitive, and social) and some indicators of the oral skill.” The indicators considered for this study were: a) fluency and coherence, b) lexical resources, c) grammatical range and accuracy, d) and pronunciation, using the IELTS exam parameters. Results that were based on learners’ perceptions, “confirmed the existence of such framework and suggest that the teaching presence fosters grammar, accuracy, and vocabulary”.

Tecedor & Campos-Dintrans, (2019) examined the impact of online voice recording (VR) activities and peer-to-peer videoconferencing (VC) conversations on the “development of beginning Spanish learners’ speaking performance” from three Spanish as a FL elementary review course. The authors sought to learn whether VR and VC promoted oral proficiency and whether that learning could be observed in presentational (or monological) and interpersonal modes of communication. In both cases, they had time to prepare their contributions.

Results indicate that “both F2F communication and VR activities promote complexity and fluency in presentational tasks and fluency in interpersonal tasks, although F2F produces superior results regarding complexity in presentational tasks”. In addition, they report that “VC activities promote complexity and fluency in presentational tasks and complexity, accuracy, and fluency in interpersonal tasks”. They conclude mentioning that aspects limiting their study is that they did not analyse individual performance indicating the possibility that “students prioritize one of the CAF traits over the others”, and the other factor was demographics indicating that one of the three groups had more years of experience than the rest and this could have influenced the results.

2.4.5.2 Constraints of Using Voice Based AoD

Abrams (2003), conducted a study that compared three groups: a control, a synchronous and an asynchronous group in online oral discussions. This is a pertinent study because it shows the asynchronous group not outperforming the control group; also, the three groups did not show significant differences either lexically or syntactically. Abrams studied the number of words, c-units, lexical richness, lexical density, and syntactic complexity. He elucidates that the extended nature of ACOM could have demotivated learners and thus explain his findings. Another limitation in this article could be the instruments used or the process for analysing the data or the linguistic elements researched, e.g., the author did not include fluency or pragmatics, among others.

Claro, (2008), investigated whether online discussions were better for language learning than F2F discussions. A group of 10 female students were divided in 2 groups, one group worked with online discussion forums and the other with the same topics but on F2F discussion sessions. Results showed “an increase in subsequent oral production of the target language by the face-to-

face group but a decrease in production of target language by the ACMC group”, both groups increased TOEIC scores in pre and post-tests but ACMC groups increased use of L1. The author states that “ACMC discussion appears to have an overall negative effect on oral production of the L2” as she compares it against synchronous and face-to-face discussion. However, she states that “it seems that fluency is best enabled by SCMC and accuracy by ACMC”. Thus, ACMC seems to be a possible option to improve accuracy in spoken production.

King, (2008) sought to “compare the levels of social presence, as measured by interaction, in voice-based and text-based asynchronous computer conferencing”. To measure interaction, the author used “the three basic categories of interaction identified by Rourke et al. (2001): affective interaction, communicative reinforcement interactions, and cohesive interactions”. Results show significantly “higher levels of affective and communicative reinforcement interactions in the text-based asynchronous computer conferences”. Conversely, “voice-based asynchronous computer conferences contained higher levels of cohesive interaction patterns” although not significantly. In sum, according to this research “there is no apparent benefit in using voice-based rather than text-based technology tools to facilitate asynchronous computer conferences in a Web-based learning environment”.

All these studies shed light on voice-based AoD forums as a tool that needs to be designed with a specific pedagogical purpose in mind and not overused but rather integrated with other tools and strategies to better help students improve. For this research project, the aim is to improve spoken production and the different information presented above should be considered when designing voice-based AoD forums and tasks aimed at the teaching/learning of spoken production. A summary of design considerations for voice-based AoD forums is described next.

2.4.6 Designing Voice-based Asynchronous Online Discussions (AoD)

The need to design AoDs that have a positive impact on learners is increasing year after year as situations such as the Covid pandemic come to put a strain on the teaching profession. The design of the discussion forums in this research fed on the literature reviewed on (2.4.3, 2.4.4, and 2.4.5). A review of the most important elements to consider in the design of AoD forums is presented below.

Rovai, (2007) recommends that “online courses need to be designed so that they provide motivation for students to engage in productive discussions and clearly describe what is expected, perhaps in the form of a discussion rubric”, and for the specific case of AoD forums the “instructors need to provide discussion forums for socio-emotional discussions that have the goal

of nurturing a strong sense of community within the course as well as group discussion forums for content-and task-oriented discussions that center on authentic topics.”

The same author states that if discussions are going to be facilitated effectively, instructors have to “generate a social presence in the virtual classroom, avoid becoming the center of all discussions by emphasizing student–student interactions, and attend to issues of social equity arising from use of different communication patterns by culturally diverse students”.

Hew & Cheung, (2012: 50-61) explain that assigning a grade for discussion forums ensures participation but only to comply with course requirements and no further elaboration is made, recommending to add them with extra course grades rather than mandatory grade, also to have peer-to-peer evaluation of the contributions, to use rubrics, and to change grades based on the student observations or reflection regarding the discussion. They also state that requiring a specific number of posts was not conducive to more interaction since learners stopped once they achieved the goal (number of posts required) and that deadlines were correlated with the number of posts with most of them clustering around the deadline for posting leaving very little time for interaction to occur. The authors suggest encouraging students to post every 24 or 48 hours rather than setting up several deadlines for the forums (suggestion is to research this further).

The same authors suggested a reward system where the more participative learners would receive points that could be traded for course related material that was not available elsewhere (similar to frequent miles in airline programs) including points for posting, for answering, for generating replies this system appeared to generate the most interaction even when the program was removed. This system was not used for this research study as the level of immediacy in reviewing the contributions was far too large for the researcher to be able to apply it.

Hew & Cheung, (2012) also suggested providing guidelines for replies such as elaborating if they only replied with a positive phrase (e.g. “I agree”, it was ok, but they had to elaborate on the idea). They mention discussion openers or categories, arguing that work in this area is inconclusive and that most categories do not work as intended and stall interaction among students. They also discuss the length (days to complete the assignment) of the discussion forums, finding that the time does not necessarily represent a benefit and it is comparable to FtF discussions, then it becomes a matter of preference rather than mode; they discussed that when AoD were left as work at home, learners prioritized either work or family commitments over discussion forums, stating that the only way to shift these priorities was to somehow create a sense of urgency for the discussion. For this project, the online mode was contemplated in one of the days of class by asking students to go to University designated areas where they could use computers.

In order to achieve a good voice based AoD design, besides the above, the most influential model for this project was the Community of Inquiry Model (CoI) which will be discussed further in the following section.

2.4.6.1 The Community of Inquiry Model

CMC draws on the Community of Inquiry Model by (Garrison et al., 2000) for the design of discussion forums, for both writing and speaking, and on different studies conducted on the effect that online voice discussion forums have on spoken production such as those by Abrams (2003), Braul and Chao (2003), Poza (2011), James (2013), Wilches (2014), Eslami et al. (2015), Dugartsyrenova and Sardegna (2017) among others as mentioned above (see 2.4.5). Even though the main focus of this research is on spoken performance, there was an equal interest in exploring other effects that arose from the perspective of Foreign Language Pre-service teachers.

Garrison et al. (2000) argue that universities are considering CMC, particularly computer conferencing, as a multipurpose “medium for the delivery of educational programs ‘anytime, anywhere’”. In an online environment, interaction becomes a very important factor to consider (see 2.3). Specifically, when deciding to undertake Blended Learning, there is a need to consider the way in which to develop interaction in both modes (online and face-to-face). These authors introduce the Community of Inquiry model which presents the premise that, in CMC environments, learning occurs from the interaction of three essential elements: cognitive presence, social presence and teaching presence.

They explain that the three elements above emerged from analyses of computer conferencing transcripts and that they are an important part of any educational transaction. Although presently, the computer is no longer the only element used for communication, its asynchronous nature can still be observed in newer forms of communication such as mobile phones, or gaming platforms.

In general terms, Garrison et al. (2000) maintain that cognitive presence is “the extent to which the participants in any particular configuration of a community of inquiry are able to construct meaning through sustained communication”. They also contend that social presence is understood as “the ability of participants in the Community of Inquiry to project their personal characteristics into the community, thereby presenting themselves to the other participants as “real people””.

The third element, teaching presence refers to two functions. The first is “the design of the educational experience. This includes the selection, organization, and primary presentation of course content, as well as the design and development of learning activities and assessment”. A

teacher will usually perform this function. “The second function, facilitation, is a responsibility that may be shared among the teacher and some or all of the other participants or students”.

This model becomes an important part to consider for this study since it deals specifically with issues of how to manage or improve Computer Mediated Communication which is one of the key points of Blended Learning and of this work in its asynchronous form. The Col can be a very valuable reference for designing voice-based AoD discussion forums, in turn, forums can be used for discussing content, planning or performing tasks, or supporting students. All activities in AoD forums should align with course/syllabus objectives.

Besides the above, it is equally important that spoken production be defined so that the effect that the AoD tasks may have can become clear. In order to better understand what spoken production means, the term communicative competence also needs to be explained as it is the basis for understanding what written and spoken production are. For this research study, ACMC in the form of voice-based asynchronous online discussion forums were used in order to explore the impact that they would have on the development of spoken production, the next section will examine what is understood by spoken production, the components it has and where it stands in communicative competence.

2.5 Spoken Production

This project intends to observe the effect on spoken production of the use of voice-based AoD forums on pre-service English language teachers. In order to do that, there is a need to understand what spoken production is so that there can be a clear goal or point of comparison when understanding whether AoD forums have been beneficial or not. The teaching/learning of spoken production has been an important challenge for many English as a Foreign Language (EFL) teachers and, as stated by Garbati and Mady (2015), “Research regarding effective teaching and learning strategies to aid L2 oral development has garnered much attention” and added that there is still not a clear set of “best practices”.

Segura (2012), argues that “Speaking is generally thought to be the most important of the four skills” and that “one frustration commonly voiced by learners is that they have spent years studying English, but still they cannot speak it.” Chen and Goh (2011), mention that “teachers are frustrated by their low self-efficacy with regard to oral English proficiency and inadequate pedagogical knowledge”. Self-efficacy defined by Shea and Bidjerano (2010), as a “subjective judgment of one’s level of competence in executing certain behaviours or achieving certain outcomes in the future”.

Several studies have attempted to explain what spoken production is and the way it is taught in EFL classrooms. For instance, Levelt (1989), defines it as an interactive productive process which involves receiving, constructing and conveying meanings embedded in spoken words. The CEFR (2018: 68), considers Spoken Production as “a ‘long turn,’ which may involve a short description or anecdote, or may imply a longer, more formal presentation”; it also explains that spoken production is organized in terms of three macro-functions (interpersonal, transactional, evaluative), with two more specialized genres: Addressing audiences and Public announcements.

Levelt (1989), stated that to carry out spoken production, there are four processes that are required: 1) conceptualization or the planning of the contents of our messages. 2) Formulation which involves selecting words and phrases to express ideas or meaning. 3) Articulation where the actual physical production occurs, and 4) Self-monitoring involved in the awareness of the speakers’ own mistakes.

On the other hand, the CEFR (2018: 78), presents four production strategies, for both written and spoken production. The first, Planning, refers to the mental planning or what to communicate before speaking or writing. It can mean intentionally thinking about what and how to say something and can involve rehearsal or drafting. The second, compensating (or execution) is a strategy for keeping communication when one cannot recall or do not know the appropriate expression (the use of paralinguistic gesture to support language: deliberately using an incorrect word and qualifying it, defining the missing concept and/or paraphrase it, etc.). The third and fourth, Monitoring and Repair, covers both (a) the spontaneous realization that one has made a slip or run into a problem and (b) the more conscious and perhaps planned process of going back over what has been said or written and checking it for correctness and appropriateness.

Burns, (2012: 167) indicates that “Speaking is a highly complex and dynamic skill that involves the use of several simultaneous processes – cognitive, physical and socio-cultural – and a speaker’s knowledge and skills have to be activated rapidly in real-time”. She adds that it is important for teachers to know what speaking competence is and “how the different aspects of speaking relate to each other”. The author explains that “learning to speak in a second language involves increasing the ability to use these components in order to produce spoken language in a fluent, accurate and socially appropriate way, within the constraints of a speaker’s cognitive processing.” The following figure presents the components referred to by Burns.

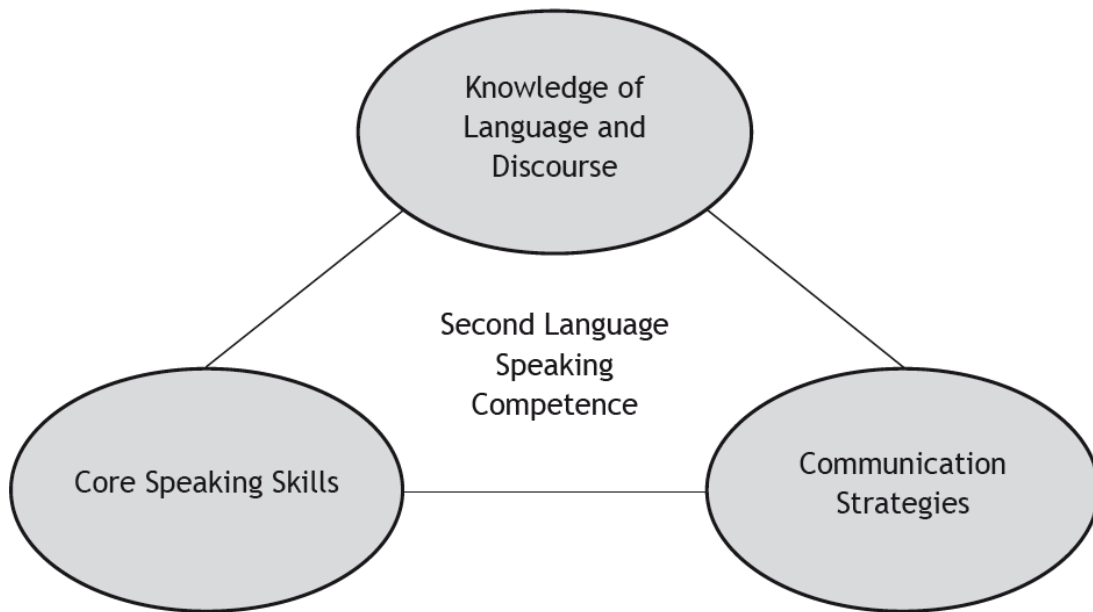


Figure 1. Components of second language speaking competence (Goh & Burns, 2012: 53)

Burns describes each of the components of speaking competence as:

Knowledge of Language and Discourse, requires mastering the sound patterns of the language (...this refers to being able to pronounce the language intelligibly at segmental and suprasegmental levels), knowing the grammar and vocabulary of the language (spoken structures, grammatical features, lexis) and understanding how stretches of connected speech (discourse, genre) are organised, so that they are socially and pragmatically appropriate (register).

Core Speaking Skills means developing the ability to process speech quickly to increase fluency (e.g. speech rate, chunking, pausing, formulaic language, discourse markers). It also involves being able to negotiate speech (e.g. building on previous utterances, monitoring understanding, repairing communication breakdown, giving feedback), as well as managing the flow of speech as it unfolds (e.g. initiating topics, turn-taking, signalling intentions, opening/closing conversations).

Communication Strategies, involve developing cognitive strategies to compensate for limitations in language knowledge (e.g. circumlocution, paraphrasing, gestures, word coinage, approximation, avoidance), metacognitive strategies (e.g. planning in advance what to say, thinking consciously about how you say something), and interaction strategies (e.g. asking for clarification/ repetition, reformulating, rephrasing, and checking comprehension). (Burns, 2012: 167-168)

According to the author this model suggests that speaking classes are not simply to get students to “do” or to practice speaking. Instead, they need to be understood as “structured and supported learning opportunities for developing these various components of speaking competence”. Students need to be guided systematically through sequential and integrated activities that raise their awareness of the “knowledge, skills and strategies needed for various types of interaction and discourse”. This is an important aspect of this research as AoD forums need to be part of the grammatical syllabus of the course.

Burns (2012: 172-176), presents a seven-stage teaching speaking cycle model for “planning holistic and sequenced series of speaking activities”. The first stage is concerned with “raising metacognitive awareness about speaking and has two main purposes:” a) to encourage learners to plan for overall speaking development, and b) to prepare learners to approach a specific speaking task. The second stage deals with providing input and/or guide planning because speaking in an L2 can generate strong anxiety so it is important for instructors to “provide support for the speaking task, giving learners time for planning what to say and how to say it”. AoD forums are a good example of how this time for planning can be provided to learners.

The third stage is to conduct speaking tasks, the aim is to give learners a context to practice through communicative tasks; this stage “encourages learners to develop fluency of expression without having to pay too much attention to accuracy of form”. Stage four consists of focusing on language/skills/strategies generating opportunities for students to improve accuracy as well as to improve their use of skills and strategies. Here “language features such as pronunciation, grammar and text structures, as well as vocabulary” can be included. In stage five students repeat speaking tasks from part three but now integrating selected language items or skills to enhance their performance.

Stage six aims to “direct learners’ reflection on learning” motivating them to “self-regulate their learning through monitoring and evaluating what they have learnt from the preceding stages”, this reflection can be carried out individually, pairs or in groups. The last stage, facilitating feedback on learning, is where “the teacher provides learners with feedback on their performance in earlier stages of the cycle.” After the cycle is complete, it can begin again, the cycle can be used in one class, in a week, a unit, or any time frame the teacher considers effective. A flow chart of the cycle is shown in Figure 2 below.

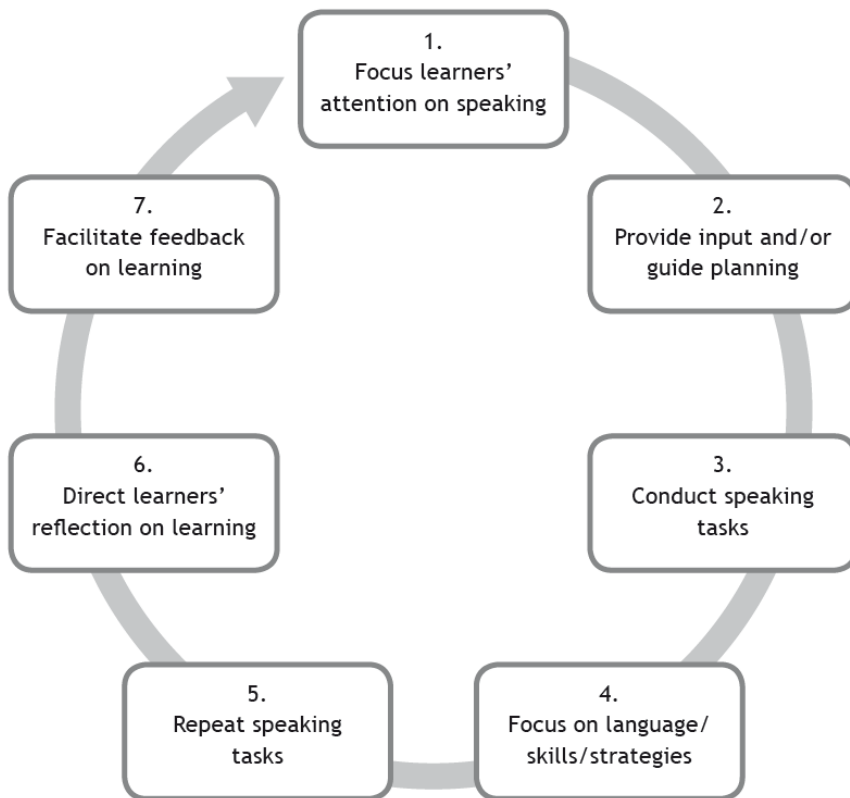


Figure 2. The teaching speaking cycle (Burns, 2012: 172)

Hughes & Reed, (2017: 48-64) discuss two models for the teaching of speaking, the first one a prescriptive where rules are to be followed and “correct” forms are to be facilitated or taught, the second a descriptive model based on spoken language corpora. In terms of materials for teaching speaking, they underpin a professionalization of the ELT community and mention that “there has been a tendency for the classroom practitioner to explore corpus, online, and task -or project-based approaches” away from published materials or to develop their own materials based on the needs of their students. They further elucidated there are two contrasting approaches more recently in the teaching of speaking, one is teaching to the test and the other teaching for interactive and pragmatic skills.

Although there are other authors defining spoken production or speaking and the way it is taught/learnt, the ideas of Levelt, (1989), Burns, (2012) and the CEFR (2018) are the most comprehensive and the ones that will be considered for the purpose of this study. Understanding how spoken production is composed, or the parts that make it up is vital for analysing if there has been an improvement or not after an intervention with learners has occurred. With this consideration, the next section will address the elements or features that are part of spoken production.

2.5.1 Components of Spoken Production

Many authors mention that spoken production (or speaking) is comprised of “Complexity, accuracy and fluency”, e.g. Skehan, 1998; Elis 2003; Elis & Barkhuizen 2005; Elis 2008; Housen & Kuiken 2009, cited in Nation and Newton (2009). In the same line, the CEFR (2018: 171) presents six qualitative features that should be taken into consideration to better understand spoken language: range, accuracy, fluency, interaction, coherence and phonology (see Appendix R). This latter categorisation is the one considered for the purposes of this study as it is the most comprehensive one. Recognising these features of spoken production allowed the researcher to better observe for differences or changes in spoken production of the participants of this research project.

This study seeks to find effects that asynchronous online discussion forums (AoD) could have on the perception of how spoken production is taught/learnt online and on the actual spoken production of the participants. From the features of spoken production above, there are two considered important to this study because of what the literature says about how they are affected by AoD (see section 2.4.5), accuracy and fluency. Even if grammatical accuracy and fluency are important, the effects that AoDs had on any of the components of spoken production or in any other area impacting learning were considered for this project.

Spoken production is part of the Communicative Language Competence of an individual, and therefore it becomes important to understand what this competence means so that we can identify the place that spoken production has in communication. Savignon (2017), argues that discussions over the concept of Communicative Competence have their origins probably in the 40’s but the concept itself gained acceptance from the 70s. The CEFR (2018), breaks it down explaining that there are three areas in communicative language competence: a) linguistic competence, b) sociolinguistic competence and c) pragmatic competence. It posits that to be communicatively competent means to be able to perform well in all three in either written or spoken production.

The first area, or linguistic competence, is described by the CEFR (2018: 131), as consisting of: a) General Range (the Range of language at the user/learner’s disposal), b) Vocabulary Range (the breadth and variety of words and expressions used), c) Grammatical Accuracy (concerns both the user/learner’s ability to recall ‘prefabricated’ expressions correctly and the capacity to focus on grammatical forms whilst articulating thought), d) Vocabulary Control: (the user/learner’s ability to choose an appropriate expression from their repertoire), e) Phonological Control: (concerns sound articulation, accentedness, intelligibility, and prosodic features including intonation,

rhythm and stress, and f) Orthographic Control: (concerns ability to copy, spell and use layout and pronunciation).

The CEFR (2018: 137), explains that the second area, sociolinguistic competence, refers to the knowledge and skills needed to handle the social dimension of language use. It deals with understanding sociolinguistic appropriateness (including politeness, appropriateness, socializing, recognition of sociocultural cues and adopting appropriate register) when having an interaction with social groups.

The third and last area, the pragmatic competence, is also explained by the CEFR (2018: 138) stating that it is concerned with actual language use in the co-construction of text. Namely how a user organizes, structures, and arranges messages (discourse competence), how they are used to perform communicative functions (functional competence), and how messages are sequenced according to interactional and transactional schemata (design competence).

It elucidates that Pragmatic competence consists of six aspects: a) flexibility: the ability to adapt language learnt to new situations and to formulate thoughts in different ways, b) taking the floor (turntaking): the ability to take the discourse initiative, initiating, maintaining and ending a conversation or intervening in an existing conversation, c) thematic development: the way in which ideas are logically presented in a text and related to each other in a clear rhetorical structure, d) coherence: the way in which the separate elements of a text are interwoven into a coherent whole by exploiting linguistic devices such as referencing, substitution, ellipsis and other forms of textual cohesion, plus logical and temporal connectors and other forms of discourse markers, e) propositional precision: the ability to pinpoint how to formulate what one wishes to express, f) spoken Fluency: a psycholinguistic meaning (accessing one's repertoire) including ability to construct utterances despite hesitations and pauses, to maintain a lengthy production or conversation and ease and spontaneity of expression.

The foregoing was essential for comprehending spoken production and in order to assess such production from the contributions of the participants the IELTS rubric for spoken production was used (see Appendix DD).

2.6 Summary

This chapter has considered the role of technology in foreign language learning and how Blended Learning (BL) has had an effect on this field. It provided a framework for BL course design considering the importance of the role of interaction for language learning in both face to face and online modes of delivery. It describes steps recommended by Hockly, (2018), for designing a

Blended Learning courses, and the twelve principles presented by Thornbury (2016) that the online components should address (see section 2.2.1).

The chapter also defines the importance of interaction and how the interactionist and sociocultural perspectives can provide support for the use of Computer Mediated Communication (CMC) through AoD forums in foreign language learning (see 2.3.) It also describes the difference between synchronous and asynchronous modes of online interaction and how CMC research (see 2.4), both synchronous and asynchronous, has impacted the online component of foreign language teaching or learning.

It also explains how research shows that text-based AOD (see 2.4.3) can have several benefits for learning and learner engagement. Studies have found that text-based AOD improves deeper thinking and reflection, as learners have more time to process ideas and craft responses. This facilitates collaborative learning. The delayed nature of the interaction also helps shy or introverted students find their voice and participate more actively.

However, for text-based AoD to be effective, they require intentional structure, guidelines, and monitoring. Instructors need to design clear, open-ended discussion prompts that elicit on-topic responses. Providing rubrics, expectations for response length/depth, and rules of etiquette help learners construct higher-quality discussions. Moderation is important to keep discussions on track, summarize key points, and ensure broad participation. Studies show more instructor posting can actually limit student discussion. Peer learning and facilitation are often more engaging.

Popular frameworks like the Community of Inquiry model (see 2.4.6.1) emphasize the need for social, cognitive, and teaching presence in AoD. Teaching presence involves designing the educational experience and facilitating discussion. Social presence allows participants to project themselves as "real" people. Cognitive presence facilitates constructing meaning through communication. Following principles like these results in more educationally meaningful AoD.

In sum, text-based AoD provides time to reflect, flexibility, and anonymity that can facilitate interaction while giving shy students a voice. Nevertheless, it requires intentional design, structure, and facilitation. With these elements in place, it can improve thinking, reflection, interaction, and collaborative knowledge construction. There is a connection between text based AoD and spoken production, but it seems to be unclear how and research has not been able to clearly explain it.

On the other hand, though less extensively researched than text-based AoD, studies suggest voice-based AoDs (see 2.4.5) also hold benefits for learner engagement, motivation, and language

development though with limited results. Voice-based AoD provides additional speaking practice in a low-anxiety environment. Learners appreciate the ability to rehearse, re-record, and control their speaking production before posting. Research also indicates voice-based AoDs increase learners' perceived confidence, risk-taking, and use of target language features, and promotes reflection on speech patterns and pronunciation and allows learners to focus on accuracy, integrating new lexical, grammatical, or phonological features.

Voice-based AoDs seem effective for enhancing learner motivation, confidence, and willingness to communicate but its effectiveness depends on intentional design and integration with face-to-face instruction. Task designers must provide training, structure, and facilitation; with careful implementation, voice AoD can provide low-anxiety speaking practice and increase focus on accuracy in either grammatical, lexical, or phonological features. The interaction in slow motion provided by AoD reduces cognitive load and anxiety compared to synchronous interactions and it seems that AoD may impact accuracy and fluency the most.

Nonetheless, empirical evidence for the benefits of voice AoD is limited. Few rigorous studies have been conducted. Existing research analyses small samples or relies heavily on self-reported perceptions. The impact on objective measures of oral proficiency requires further study. Challenges like technical issues, unfamiliarity with the technology, delayed teacher feedback, and fading motivation can also appear. Further empirical research is needed to substantiate AoD benefits for second language spoken production.

On the last section, this chapter states that spoken production is a complex, dynamic skill that involves language knowledge, core speaking skills, and communication strategies. It states that according to the CEFR, its key components are accuracy, fluency, range, coherence, interaction, and phonology.

Chapter 3 Methodology

This chapter discusses the methodology undertaken to try to understand the effects that using asynchronous online interaction both inside and outside the English Language Learning classroom, in the form of voice discussion forums, has on the perception of how spoken production is taught/learnt and on the actual spoken production of a group of pre-service English language teachers taking part in a blended learning course of English as part of their regular curriculum in their university program.

It is organized starting with the research paradigm and design, then a description of the implementation of the research followed by the design of the class and how the research fits in the class design. After that, research instruments and participants are discussed followed by ethical considerations and the role of the researcher. To finish, it explains how data was collected and analysed.

This research study took place on the fall semester of 2019 with 36 students enrolled in the English IV afternoon class on their fifth semester in a Bachelor of Arts in English Language Teaching. It consisted of an exploratory phase, an intervention phase that was divided into a pre test, a repeated cycle of collaborative forum design, student forum experience and forum feedback which was executed four times, then a post test. Next was a final student perception phase, which consisted of an individual written course reflection and a videotaped final interview carried out in groups.

3.1 Research Paradigm

This research study stands from the theoretical perspective of pragmatism. This is closely associated with a mixed methods approach where “instead of methods being important, the problem is most important, and researchers use all approaches to understand the problem” as well as explaining that “individual researchers are ‘free’ to choose the methods, techniques, and procedures of research that best meet their needs and purposes” Creswell (2003: 11-12). Creswell (2003: 16) also states that “a mixed methods approach is one where the researcher tends to base knowledge claims on pragmatic grounds (e.g., consequence-oriented, problem-centred, and pluralistic)”.

Creswell (2014: 268) explains that there are three different types of mixed methods designs: a) convergent parallel mixed methods design, b) explanatory sequential mixed methods and c) exploratory sequential mixed methods. He also contends that the exploratory sequential mixed

method is a “design in which the researcher first begins by exploring with qualitative data and analysis and then uses the findings in a second quantitative phase. Like the explanatory sequential approach, the second database builds on the results of the initial database”. Creswell continues to explain that the “intent of the strategy is to develop better measurements with specific samples of populations and to see if data from a few individuals (in qualitative phase) can be generalized to a large sample of a population (in quantitative phase)”.

For the purposes of this mixed-methods approach research, the exploratory sequential mixed methods design was used. Data was taken from the focus group and used for designing the intervention, which is in line with Creswell’s (2014: 276) example where he writes that “the researcher would first collect focus group data, analyse the results, develop an instrument based on the results, and then administer it to a sample of a population”. He adds that the “the researcher employs a three-phase procedure with the first phase as exploratory, the second as instrument development, and the third as administering the instrument to a sample of a population”.

Based on the information presented by Creswell (2014), the objective of this research study that uses an exploratory sequential mixed methods approach is pursued by employing quantitative data strategies to generate spoken production and information from a pre/post-test, qualitative data in the form of opinions, feedback, perspectives or experiences from surveys, and interviews of the same learners. In this predominantly qualitative study, a focus group, task evaluation sheets, learner final evaluation questionnaire and a final videotaped interview will be used as qualitative research instruments whereas a pre and post-tests will be used as a quantitative instrument with the abovementioned group of the Bachelor of Arts in English Teaching at a northern Mexican public university.

The mixed methods approach was selected since, as stated by Creswell (2003), including only one of the methods “falls short of the major approaches being used today in the social and human sciences”. This does not mean it was selected simply because it is the one currently being used but because, in order to better understand the effect that CMC through discussion forums could have over spoken production, having both qualitative and quantitative data could provide a broader perspective on the issue compensating for the information that each of the other approaches did not produce.

3.1.1 Action Research

The approach adopted to conduct the intervention in this research is action research, understood as “systematically collecting data on your everyday practice and analysing it in order to come to

some decisions about what your future practice should be” Wallace (1998: 4). Burns (1999) adds that the main focus of action research is on specific issues of “immediate concern to particular social groups or communities”. Moreover, as stated by the same author in Paltridge and Phakiti, (2015), action research seeks to “generate theoretical as well as practical knowledge about the situation”, and to “enhance collegiality, collaboration and involvement of participants who are actors in the situation and most likely to be affected by changes”. In this study, the problem is development of spoken production and the affected actors the pre-service teachers.

Specifically, collaborative action research was used to design this research study, defined by Gordon & Solis, (2018), cited in Alkan, (2020), as “both as university and school researchers partnering for action research and as a team of practitioners doing independent action research”. In addition, Burns (1999) state that collaborative action research processes “have the advantage of encouraging teachers to share common problems and to work cooperatively as a research community to examine their existing assumptions, values and beliefs”. Alkan et al. (2020), cite Adams and Townsend (2014) stating that “collaborative action research if conducted well has significant benefits on the individual, team, and school levels and can further lead students to improve their learning”. For this study, it means the effect of AoD forums on the perception of how spoken production is taught/learnt and on the spoken production itself in an ESL pre-service teacher training setting.

Given that this study is situated in a blended teaching/learning environment, it is worth mentioning that according to Hockly (2018) Blended Learning (BL) studies are often divided into comparison and non-comparison studies. Comparison studies compare the effectiveness of courses in blended vs traditional modes of instruction. On the other hand, non-comparison studies analyse only the Blended Learning approach with issues such as course design, implementation, attitudes, and experiences. The author states that much of the research on BL is focused on non-comparison. For this research, a non-comparison study through action research was undertaken because the context of the study did not allow for a comparison without groups sharing information regarding their in-class activities which would have contaminated the data.

3.2 Research Design

This research was embedded in a university English IV grammar-based course for pre-service teachers who had access to technology either at the University or at home. Instructors for such courses usually organize and upload their content into a Learning Management Systems (LMS) which are used to manage course information online. Discussion forums are a feature found in many LMSs, and as Farha & Chang, (2017) claim “many proponents of online delivery consider

discussion forums the “heart” of an online course.” It is in discussion forums where the intervention occurs.

The Community of Inquiry (CoI) framework (see 2.4.6.1) was considered for the design of the forums in the present study. The most important aspect of the CoI model is its collaborative constructivist approach to teaching and learning and is based on facilitating deep and meaningful learning. The model has three interdependent structural elements —social, cognitive, and teaching presence.

Considering the above, with the purpose of investigating my research questions, an intervention was planned where, through the use of voice-based interactions in a discussion forum, the effect that voice based AoD forums would have on participants could be explored. Literature already presents several advantages of voice-based AoDs for spoken production (see 2.4.5). For instance, Bakar et al., (2013) state that the “online discussion forum not only motivates learners to speak, but also encourages those who are shy and withdrawn to be more courageous and willing to participate”, they also mention that “online discussion provides them {participants} with a non-threatening environment that reduces their anxiety and concerns about being embarrassed”. In addition, they explain that it provides “extra time for the learners to reflect, think and search for additional information before contributing to the discussion” and that “all exchanges of information between learners are also stored for future reference” besides being free from constraints of time and location. For more effects of AoD forums on spoken production among others (see 2.4.5.)

This research project started with an exploratory phase where a focus group was conducted to understand the beliefs of students from the BA in ELT program regarding their experience and possible uses of AoD forums including their thoughts on using a voice-based discussion forum. This was followed by an integration of the findings from the focus group with information from literature on the use of voice-based AoD, and subsequently an intervention was planned. In order to attempt to explore the effect of the intervention quantitatively, a pre-intervention speaking proficiency test was administered to the candidates and, after the intervention, a post test ensued.

The intervention consisted of working collaboratively in the design of forums so that the pre-service teachers could experience both the design process of a discussion forum and the experience of participating in it; to do so, the first step was for the researcher to design a text-based discussion forum, which is what they had experienced before, to make sure that all the pre-service teachers had participated in one but including a design that appealed to personalization, asynchronous interaction, integration of a grammatical aspect of the language, giving everyone

equal opportunities to participate, giving enough time for them to prepare, re-edit, and compare their ideas to others before posting them, seeking a sense of community and the three elements of the CoI (see Appendix D).

After they had participated, the collaborative cycle began with a feedback session where they integrated their thoughts and views on the forum they had just finished and suggested improvements for the next one. For the feedback session, the participants were put in groups of four to five people maximum and discussed their experience with the forum, they then brainstormed what suggestions they had to improve it. After that each group selected a spokesman to share, with the class, the recommendations they had to improve the forum, they were allowed to ask questions to the teacher/researcher if they wanted. At the end of the session, after listening to all of the comments from the different groups and given time to reflect, students were asked to individually submit a forum evaluation sheet (see Appendix M) where they could indicate what they had liked or not and the suggestions they had for that specific forum.

After the first feedback session, the researcher told them that the next forum tasks would be designed by them, the participants were then given a class where considerations for forum task design were discussed (see 2.4.6), the same criteria as discussed above for the design of the first forum was contemplated with them besides the information summarized from the focus group and from literature, the only restriction was that they would have to design it to occur exclusively through voice posts.

Groups of four to five students were formed in the class and were asked to design the forum task taking into account the considerations mentioned. Once they had designed it, the groups presented their designs to the class and there was a secret individual vote casted to select the group that had the best design. The forum design was selected and integrated into the LMS as a graded assignment for class. Once the students had finished participating in the forum they had just designed, a feedback session ensued; thus, completing the first cycle of forum task design, this cycle would repeat three more times. After they had finished the first forum (text-based and designed by researcher), the second forum was completed (voice-based), to be followed by the design of the third forum which had as a specification that interaction should be through video only; the last two forums gave the option to the learners to use either voice or video excepting text since the purpose of the study was to explore effects in spoken production.

After the above intervention had been completed, and learners had completed the post test, a written reflection, which is a regular part of the activities the instructor asks to most of his BA in ELT classes, was requested as a regular graded assignment that had full score just with submitting

it regardless of the content (see Appendix N). Once the class was finished and all participants had their course grades, a final interview was requested. Students were asked to form groups with the classmates they preferred and were asked about the whole project experience (see Appendix O), groups of approximately 5 people were formed. After that, all the information was analysed to explore the effects that the intervention had.

In order to carry out the abovementioned research, a class was requested to the administration of the B.A in ELT of the university in order to implement the ideas and permission was granted (see Appendix Q). To achieve the CMC with the intended asynchronous aspect of communication, a Learning Management System (LMS) called Schoology was selected (see Appendix D). It was chosen because of user acceptance, user friendly interface, free access, and the compatibility for creating discussion forums that could be easily accessible by either computer, tablet, or mobile phones. After the above was considered, the implementation of the study was designed in a series of steps and cycles as described below in the following section.

3.3 Implementation of the Research

The first step taken towards initiating this collaborative action research study was to conduct an exploratory phase into the beliefs, experiences, and expectations of future teachers regarding asynchronous online discussions. Towards the end of the 2019 spring semester and after obtaining permission from the BA in ELT gatekeeper, an e-mail was sent to teachers from the BA in ELT who were currently teaching one of the English classes of the program asking them if I could invite their students to participate in a focus group. If they decided to accept, the e-mail contained an invitation for students to contact the researcher to set up a meeting. After obtaining a limited response from students, I went to the classroom of students from second and fourth semesters and personally invited them to participate in a Focus group, obtaining more voluntary participants after they asked some questions related to what a focus group was and the purpose for conducting it.

3.3.1 Exploratory Phase

For this focus group, first the number of participants and questions were determined and sent for revision by the ethical committee in Southampton (see section 3.6, and 3.7). Once they were accepted, the venue was set up in one of the classrooms of the university where I currently work, the recording equipment was a camera provided by the university department. (Bloor, Frankland, Thomas and Robson (2001) state that there are four possible types of analyses for focus groups: transcript- based, tape-based, note-based, and memory-based analyses. For the purposes of the

present study the first two types were used since they were the most thorough of the four. Thus, the interview was recorded and later transcribed. In addition, the possibility of maintaining the same perspective from the researcher being the interviewer and the writer of the report helps keep a better understanding of the group interaction and the possibility of using such report for extended uses Bloor *et al.*, (2001).

The purpose of the focus group was to explore their beliefs, thoughts, and experiences in regard to teaching/learning a foreign language focusing on spoken production. The idea was to find out how they thought speaking was learned or taught in a foreign language context. After that, the intention was to analyse how or if technology helped develop spoken production or any of its components. Next, there was a discussion over what software or apps were the most effective to develop accuracy in spoken production from their perspective.

Afterward we discussed whether a teacher could have a predominant role in a class depending on what she or he did with technology in the classroom or online learning environment. Next, in the focus group, there was a debate of whether discussion forums could assist in the development of spoken production. We then discussed the design of discussion forum activities and what affected them. After that, I mentioned WhatsApp communication as a form of forum and asked them whether they only typed when they used WhatsApp; they mentioned that they also used voice notes and we reflected on how that was an audio-based forum.

The conversation continued with the activities through technology that they thought would be most effective to develop spoken production in online environments. After that, we continued to discuss the difference between synchronous and asynchronous communication in WhatsApp, what benefits the voice notes would have if we could hear them before actually sending them. Then, we discussed the different activities participants could think of for synchronous discussions and for voice-note discussions. We discussed the amount of time that would be appropriate for synchronous and asynchronous activities and whether they would prefer text, voice, or video discussion forums.

In order to collect data, the focus group discussion was video recorded with a Sony video camera lent by the coordination of the BA in ELT. After the focus group discussion had finished, I, the researcher watched the video, transcribed it, and studied the conversation, and organized the participants' responses in different categories and frequency in order to understand them better (see Appendix P). Once I had finished organizing the categories, I analysed the results and the most important aspects that the focus group yielded were that speaking and accuracy are learned through practice or exposure, that technology can help develop speaking through providing practice opportunities, that there needs to be interaction, motivation (or necessity), guidance by a

teacher, interesting topics, tutorials for accuracy, asynchronous to have time to perfect the message, not to have time restriction, and to have as an option a place (other than home) to practice. I noted the comments made and took them into consideration, together with theoretical information, for the implementation of technological tools in designing the voice-based AoD intervention that took place for this research.

3.3.2 Intervention Phase

As mentioned above, in order to have more control over the implementation of the intervention, the decision was made to teach the class where the participants would also be the students of the researcher as this would assure the researcher access to the study subjects. In that sense, the English IV grammar-based course, part of the BA in English Language Teaching curriculum was thought to be the best option to be imparted by the researcher. A formal request for the class to be assigned to the researcher was presented, and once it was authorized (see Appendix Q), the analysis of the syllabus, the organization, and the type of intervention designed ensued. It was in that moment of time when the ethics submission was presented and later approved by the University of Southampton (see 3.7).

English VI is a face-to-face course with a grammar-oriented syllabus and the textbook used for the development of the topics to cover in the course is called "Focus on Grammar 5" on its fourth edition. Using the syllabus and the above textbook, the topics were studied; there were five main grammar points to explore (see Appendix C). How the different grammar points could be used with discussion forums online to foster spoken production was the next point reviewed. Here, a blended learning approach was selected to be able to implement the AoD. Literature on the implementation of technology and forum design was studied in an attempt to explore everything needed for a good discussion forum design.

The first aspect to consider in the actual research intervention was a spoken production pre-test. The intention of this test was to have an indication of the learners' speaking abilities before the application of the online discussion forums. For this spoken performance test, the speaking test number one, from Gear and Gear (2006) fourth edition was used, this is a TOEFL-like proficiency test. The participants were taken to a computer centre where they were able to complete the tasks in this speaking pre-test and upload their answers in audio for later analysis.

In the planning of the intervention, a decision was made to include the participants/learners in the design of the forums that they participated in so as to increase their motivation for participating in them and generate reflection. To include them in the instrument design, a presentation was made where the researcher/teacher discussed the different theoretical aspects

that underlie the design of activities or tasks for asynchronous discussion forums online together with information obtained from the focus group.

The intention of that talk was to prepare participants to be able to assist in the design of online discussion forums and to be able to analyse them as well; only the first forum would be designed in text by the researcher alone, the second one would be designed integrating only audio, and the third integrating only video. For the last two, however, the intention was to do them in different media depending on the feedback sessions that we had in class to talk about the forum in which they had participated, those last two would be designed considering the participants preferences and likes. What actually happened was that participants felt choice should be part of the design, so they were given the option to post in either audio or video (because of the aim of this research, text was not presented as an option for the last two).

Another aspect considered was the inclusion of a researcher's diary where after every forum, or in any stage of the intervention if there was something to comment; namely, design of the intervention, application of the pre/post tests, feedback on the forum activities finished and proposal for the next forum activities, or any other relevant situation that could arise, the researcher could record it. In order to do so, immediately after each of these sessions occurred, it would be accompanied by a voice recorded reflection of aspects of interest to be noted by the researcher. Eventually this diary was discarded as the amount of research work and after class activities, including attending students for different reasons made it difficult to be consistent and to have well thought meaningful reflections.

The purpose of the different instruments was to be able to gather data that could help answer the research questions proposed for this study. Refer to the following table to link the different instruments used for each research question.

Research Question 1:	Proposed instrument(s)	Instrument(s) intended objective
What is the impact of the use of asynchronous voice-based discussion forums in the language classroom on: a) the development of spoken language competence? and b) individual affective factors?		
a) the development of spoken language competence?	Pre-test on speaking	To obtain an indication of the participants' spoken production performance before starting the course/intervention
a) the development of spoken language competence?	Post-test on speaking	To obtain an indication of the participants' spoken production performance after the application of the course/intervention
b) individual affective factors?	Final group interview	To analyze the different strategies learners used, how effective they were and why they decided to use any them in the AoD. To identify whether participants would adopt AoD and why.
Research Question 2:	Proposed instrument(s)	Instrument(s) intended objective
What techniques and strategies do L2 learners use when completing tasks in asynchronous voice-based discussion forums?	Online discussion fora	Provide the environment for learners to engage in online asynchronous discussions. To provide audible evidence for researcher's analysis.
	Final group interview	To analyze the different strategies learners used, how effective they were and why they decided to use them
Research Question 3:	Proposed instrument(s)	Instrument(s) intended objective
What aspects need to be taken into account when designing L2 online voice-based discussion forums?	Task assessment for every discussion forum	To provide information for analysis over the likes and dislikes of learners and to see the recommendations they offer for creating other fora. To identify any design aspect that improve or assist in improving the AoD forums
	Final group interview	To analyze the different strategies learners used, how effective they were and why they decided to use them. To identify any design aspect that improve or assist in improving the AoD forums

Table 1. Instruments proposed to obtain information that contributed to the answer of each of the research questions.

On the first week I talked to the learners about the research project that was underway, the different elements that it entailed and how they were being invited to participate without having to do any extra work aside from the work that was going to be part of their regular course. Once the invitation was made, I gave them a couple of forms to sign, one which was a consent form and the other one a participant information sheet where I explained the purpose of the present study and told them that they would have five days so that they would consider participating or not and that there would be no penalty or repercussion for not participating, that it was completely voluntary and that the only difference between participating or not was whether the information that they produced would be considered or not for analysis in the research. I also mentioned that most of the data to be collected for this research would take place in the two hours allocated on Fridays labelled as “online practice” during the complete sixteen weeks of the course.

All of the students decided to participate. I told them that the first aspect that we would work with for this research study would be an initial speaking test designed for me to have an indication of their spoken production abilities. On week one, for that particular assignment, the speaking test was uploaded into an LMS called Schoology, and the students were taken to a computer centre where they had the necessary tools to be able to answer the pre-test (see Appendix GG).

For the above assignment, I did not give any specifications on how to make their voice recordings but once they were working on the test, I did tell them not to write the answers beforehand as it was a test. I also mentioned not pausing recording and later continuing their contributions as I wanted to have a real indication of the spoken production skills they held at the moment. Their contributions were voice recorded and uploaded into an LMS so that the information could be stored for later analysis.

On the second week, as the second part of the development of this instrument, the learners were taken again to the University’s computer centre to have their first experience with a text based forum that integrated the elements presented by the literature (see Appendix D) so that they would work with an asynchronous online discussion forum to be sure on how discussion forums worked and how to develop their ideas in a discussion forum taking into consideration that most of them had used WhatsApp in the past or use it regularly. Thus, I made sure that everyone had the experience of having participated in a text-based AoD forum. The participants were physically in the University, the researcher was there to assist if any one of them had a problem or question.

The forum was open for a complete week in case someone wanted to continue their work or post anything else.

For the third week, once the first text forum was over, participants were taken to a F2F session and formed groups of maximum five people in class and discussed their experience with the forum they had just finished. Then, the groups, through a spokesman, shared with the class their views and recommendations on how to improve the forums. Next, they discussed again in their teams including all the comments they had heard from the other teams to have a more complete reflection of their experience with the forum.

After that, every participant received a task evaluation sheet that was designed to obtain information from them regarding the discussion forum they just participated in. The questions in the evaluation sheet were designed to find out what they liked from the task in that discussion forum, what they did not, what they would change, what were the aspects that they would not change, and how they would give that activity to their own students when they became teachers (see Appendix M). This evaluation sheet together with the class discussion was intended to generate a more profound reflection on how to better design AoD forums.

For the completing of the task evaluation sheet, after the class discussion, I gave them a sheet of paper where they had to answer individually. After that, in their homes in case they wanted to add something else, they had to upload those answers as part of a forum evaluation assignment uploaded into Schoology (the LMS) for later analysis, this way assuring that the information would be kept for later analysis. To avoid receiving only comments that students thought the researcher/instructor wanted to hear, participants were told that just with uploading the assignment, they would have a full mark. The assignment was given a mark since literature stated that participation is usually tied to course marks.

On week four, once the participants had finished the task evaluation sheet (for the first forum), learners were taken again to a F2F session in the usual classroom where the teacher informed the results of the evaluation sheets they had submitted for their previous forum (see Appendix MM). A discussion ensued over the best topics to use in order to design an online discussion forum based on the grammar point to be studied for that unit.

Participants were organized in groups of maximum five people and they decided on a topic, proposed some recommendations on what to include as part of the instructions for the forum and ultimately designed how they would give the next forum. They were told that the only restriction for this second forum was that it was going to be an only audio forum. While doing their task design proposals the researcher would go around the class and ask them if they had any questions or whether they were considering all the points necessary for the design.

After they finished their design, every group presented their proposal, all proposals were considered and a secret and individual vote was casted by every participant. Voting was usually done by writing the name of the team that proposed it on a small piece of paper and giving it to the researcher who then counted the votes and selected a “winner”. The only restriction was not to vote for their own proposal. The proposal with the most votes was used as the next forum task.

On week five, learners were taken once more to the computer centre to work on the second forum. The instructor was there to assist them in case they had any problems, doubts, or recommendations on how to complete the forums correctly. Once the students/participants had finished the second discussion forum assignment through uploading only audio files, on week six, there was a second feedback session where they were given again the same task evaluation sheet but the feedback format was modified slightly.

On this occasion, students were set into teams of 4 and asked to discuss the questions that appear in the task evaluation sheet. After that, every team was asked to answer one of the questions found in the task evaluation sheet, and once they had answered it, they shared their answer with the group, then the other teams were given the option to elaborate on those answers or to say why they did not agree with what they had said. Upon listening to the answers of all of the questions in the class discussion, the participants were told to individually write down their answers to the questions in the task evaluation sheet and to upload them as part of another assignment to Schoology.

Once the answers to the task evaluation sheet were analysed in search for similar ideas. Those ideas were grouped into categories and taken into consideration for the development of the next discussion forum. On week seven, for the design of the next forum, on a F2F session, participants were asked to give their input over what topics, what instructions/tasks, and how they would present the forum with the only restriction that the forum had to be based on only video. The same process as before was followed selecting the proposal with the most votes for the design of forum three. Week eight was devoted to completing the AoD forum in the computer centre with the same complete week to answer, and week nine devoted to a F2F session where feedback was provided.

Week ten marked the beginning of the last two forums (and 2 cycles as well), for these last two forums, the participants were given the option to post in either video or audio. This week was employed on designing forum number four and the following, week eleven on answering the forum; feedback for this forum occurred in week twelve on a F2F session as well and the next three weeks, thirteen, fourteen and fifteen on the design, execution, and feedback of forum number five. The last week of the course was used for giving final grades to students.

All students received a test on spoken production at the beginning of the course to establish the range and grammatical accuracy they showed. Once the course was over, a second oral production test ensued to compare the results of the initial to the second in search for improved grammatical accuracy or any other difference in linguistic features that could have appeared. These oral proficiency tests were evaluated through the IELTS rubric (see Appendix DD).

3.3.3 Perception Phase

Once the learners had finished the tests, they were asked to individually complete a semi-structured survey which is a common practice in most BA in ELT classes taught by the researcher/instructor intended to explore the overall class experience but, in this case, there was a section focusing on the experience of developing speaking. After that, the answers were analysed in Nvivo and coded according to emerging themes. To conclude, at the end of the course, a videotaped interview with open questions was conducted to know the participants attitudes, motivation, and experience of the project as a whole.

The implementation of the research project was embedded in a section of a BA in ELT English class which will be described next.

3.4 Design of the Class

This section introduces the design and rationale for the course that was delivered as part of this research. It takes existing and course book content and integrates these into a blended learning mode where the cycles described above (see section 3.3) are matched onto individual units of the course book (see Table 2. Organization of course daily activities per week below).

The University as well as the Department of Foreign Languages grant academic freedom to its teachers. However, the Department suggests they adopt a Communicative Approach to teaching foreign languages. Thus, teachers are allowed to follow the approach or methodology they feel adapts more to the content they need to teach. In the case of English, in the BA in ELT, there are six required English courses teacher trainees need to complete and instructors are free to select the method they consider to be the most suitable.

The first course students have to take is called Workshop for Communicative Abilities in English, after that they have four consecutive English courses named English I, II, III and IV, the last English language course required is named Academic English which aims to place students in a C1+ level of English according to the Common European Framework of Reference for Languages; after that, they do not have any more English courses. In courses one through four, the textbook used is the

“Focus on Grammar” series by Longman; although a communicative approach can be used to teach it, there is a clear structural component to these courses as evident from the name of the book. The course undertaken for this study, English IV (see Appendix S), works specifically with *Focus on Grammar 5* by Maurer (2011).

For this course, the researcher/teacher included the second half of the contents of the book, or from unit V to unit IX. The previous half, from unit I to IV was studied in the English III course. The book itself has several exercises to practice the grammar points in each unit in terms of reading, writing, listening, and speaking. These book exercises were complemented with some other tasks related to English teaching so that they would not only practice grammar as a learner, but they would also experience how to teach that particular grammar point and analyse the typical issues that arise when adopting the perspective of the teacher.

For this particular research, trying to get teachers to accept to include a series of tasks designed by someone else onto their own classes would complicate the development of this research. Anticipating a possible refusal, or any possible hindrance, the decision was taken to request a class that the researcher could control in order to implement the complete cycle of activities reducing the possibility of interruption of any cycle.

After the request was placed before the head of the Foreign Languages department and determining if there were any English courses available that the researcher could have access to, to simultaneously teach and implement the research, a level IV in the fifth semester of the Bachelor of Arts in English Teaching program became a possibility and was assigned. Then, the syllabus was analysed to determine the best way in which to include the asynchronous online discussion forums.

This particular B.A. program offers face-to-face instruction only but offers the possibility to the teachers to use the mode of teaching they consider most appropriate as long as it is justified. Thus, a Blended Learning environment was chosen as the teaching mode considering the widespread use of technology (see section 2.1) and the restriction that classes offered by this B.A. cannot be taught completely online (distance). For the design of English IV into a Blended Learning environment, concepts from different authors were taken into consideration but of great importance are Hockly (2018) and Neumeier (2005) blended learning design parameters, and for the design of tasks, concepts from Nunan (2004), Ellis (2005), Willis and Willis (2007) and Kern (2006) were used.

Neumeier (ibid) emphasizes the importance of deciding the modes of delivery to be used. For this particular case, and because of the school curriculum, eighty percent face-to-face class and twenty percent of online work was planned in a course that consists of one hundred and sixty

hours distributed in sixteen weeks of work. There is a total amount of ten hours per week where two hours per day are dedicated to this particular subject; every Friday of this course was dedicated to online work, thus, integrating online work with face to face work which Neumeier (ibid) refers to as the model of integration. See table 3.1 for daily organization of activities.

Schedule	Monday	Tue	Wed	Thu	Fri
02:00-03:00	Grammar intro	Ss presentations	Reading	Writing	Online Practice
03:00-04:00	Focus on grammar	Grammar practice	Listening	Test Practice	Online Practice

Table 2. Organization of course daily activities per week

Neumeier (ibid) also argues that “There are two ways of incorporating learning content and objectives into a BL environment: parallel or isolated”. For this particular course, parallel incorporation of learning content was used; this means that a grammar point could be explained in a face to face (FtF) session and then practiced in an online setting.

The next parameter mentioned by Neumeier is the language teaching method used for each mode. For this case, Willis and Willis (2007: 1) state that “the most effective way to teach a language is by engaging learners in real language use in the classroom. This is done by designing tasks-discussions, problems, games, and so on which require learners to use the language for themselves” thus, defining task-based learning. Nunan (2004: 1), divides tasks into target tasks and pedagogical tasks, he further explains that the first type “as the name implies, refer to uses of language in the world beyond the classroom”, and states that “pedagogical tasks are those that occur in the classroom” arguing that when tasks are brought into the classroom they “become pedagogical in nature”.

Additionally, Ellis (2005: 4), divides task planning into two types: pre-task planning and within-task planning mentioning that they “are distinguished simply in terms of when the planning takes place – either before the task is performed or during its performance”. He further breaks down pre-task planning into rehearsal and strategic planning explaining that “Rehearsal entails providing learners with an opportunity to perform the task before the ‘main performance’. In other words, it involves task repetition with the first performance of the task viewed as a preparation for a subsequent performance”. The same author elaborates on the concept of strategic planning, stating that it “entails learners preparing to perform the task by considering the content they will need to encode and how to express this content”. This is particularly relevant for this study as the asynchronous nature of online discussion forums allows learners to rehearse their contributions before actually posting them.

Moreover, Ellis (Ibid: 4), also divides within-task planning into pressured or unpressured, stating that “in an unpressured performance learners can engage in careful on-line planning resulting in what Ochs (1979) has called ‘planned language use’”, on the contrary “in pressured performance learners will need to engage in rapid planning resulting in what Ochs calls ‘unplanned language use’” and mentions that “unplanned discourse tends to manifest non-standard forms acquired early whereas planned discourse contains more complex, target-like forms”. In this way, the guiding principle of the design of tasks for the asynchronous online discussion forums at the core of this research intends to provide a condition that Ellis (Ibid: 5), describes as “where the learner has the opportunity for both pre-task planning and unpressured within-task planning”. In the same author’s words, it “can be expected to create the conditions that help learners maximize their competence in performance”.

The above definitions of task-based teaching and learning are being considered for the purposes of this research and course design, for both the FtF and online components. This particular setting is in which the asynchronous online discussion forums are framed and where learners have to carry out a task, in this case, they usually discuss a problem or situation that would allow them to practice the grammar point being studied in a particular unit of the course. The interaction on the first forum (see Appendix D) was first designed by the researcher/teacher and subsequent forums were designed together with the learners who at the same time experienced how it felt to carry out the forum they had devised.

The decision of the researcher to design the first forum alone, was based on what Kern (2006: 192) defines as the medium role, where “technology provides sites for interpersonal communication, multimedia publication, distance learning, community participation, and identity formation” and considering from experience that learners are familiar with text based discussion forums, or as mentioned by Ortega et al. (2014: 2) with forums “in a multimodal, multitasking manner” the first forum intended to assist teacher trainees in attaining all the above so that they could feel more comfortable for the second forum. This in addition to considering the information obtained from the focus group conducted as part one of this study (see page 85).

To continue, Neumeier (Ibid: 173) discusses the interactional patterns to be used in the blend. She particularly focuses on the interaction patterns that occur through, with and at computers/networks and which can be either synchronous or asynchronous. She also elucidates on the level of autonomy of the learners when carrying out tasks and the location of where each of the modes would take place. After considering the ideas of Neumeier (2005), Hockly (2018) and Thornbury (in McCarthy, 2016) for designing the blend, the dates for each unit and all activities were planned, including the asynchronous discussions that are at the core of this research (see table 3 below).

DATE		UNIT	FORUM ACTIVITY
From	to		
Aug 12	Aug 30	I	Pre test
			1st forum. Text based
			Forum task evaluation
sep-02	sep-25	II	2nd forum. Audio based
			Forum task evaluation
sep-26	oct-16	III	3rd forum. Audio/video based
			Forum task evaluation
oct-17	nov-06	IV	4th forum. Participant generated
			Forum task evaluation
nov-07	nov-29	V	5ft forum. Participant generated
			Forum task evaluation
			Group Interview
			Post test

Table 3. English-IV course dates and research activities.

The research was integrated into the normal design of the course (see Appendix C for course syllabus) and although the course has a strong grammatical tendency, teachers have the freedom to teach the class the way they find most appropriate. In this case, the practice of the four skills, but particularly spoken production in asynchronous online discussions was a very important element in the design, the AoDs were designed as the online portion of the blend and two hours per week were assigned to them.

Since the course was intended to improve the grammar of the learner, the general structure (see table 2) began every week with an approximately one-hour explanation of the grammar point to be developed during the week, which was the grammar to be studied in each corresponding unit but broken down into weeks. The second hour was intended to have learners practice the grammar they had just seen in the previous hour on their course-book, at the end of this hour, the answers to the exercises they practiced were shown for them to check if they had answered correctly.

The third hour of every week was devoted to practicing teaching the grammatical content being studied in the unit. To do this, in the first days of the course, learners were presented with two approaches to teaching grammar, one was the Presentation Practice Production (PPP) approach using information from Ur (2018), and the Test Teach Test (TTT) approach using information from Paudel (2018). Once they had been exposed to the approaches and had practiced planning on the first week, they were asked to plan a 15-minute demo class around a specific topic where their classmates would act as their students. The teacher trainees were given feedback on their performance by both the teacher and their classmates immediately after every presentation.

The fourth hour was devoted to either creating or adapting grammatical exercises around the specific topics they were assigned when they were planning. It is important to mention that the topics selected corresponded to a mixture of cultural knowledge and topics of their interest and therefore relevant for them. For instance, during October they worked with Halloween, in November they worked with the Day of the Dead, etc. When time allowed it, pairs were created in class, and other learners had to answer the exercises created by their classmates to check how their design of exercises would be experienced by their own future students, feedback was provided by their peers. These exercises were also used when they presented their demo lessons to their classmates.

The fifth hour of the week, reading was practiced. During the first days of this course, students were trained in how to use the University of Sonora's digital library (see Appendix I), they were explained how to access the webpage, the different databases available and how to access the ones that were useful for foreign language teachers, particularly for English Language Teachers. Then, they practiced downloading a couple of articles or creating collections in their accounts. After that they were taught how to access said webpages and articles remotely (see second picture in Appendix I). Next, a discussion ensued in reference to possible issues or topics of research that are part of an ELT professional (agency, mother tongue use, motivation, etc) and that were interesting for them. They were asked to select only one of those topics to research and read about during the complete course.

Once the learner had knowledge of how to access digital content from reputable sources, in class, a list of problems and issues that are usually part of English teaching were discussed and learners were asked to select one topic (see Appendix J) that they would research during the complete course, at the end of the course, they would submit an essay and make a presentation (see Appendix K) to explain their findings.

For the sixth hour of the week, listening practice activities were designed. This practice consisted on two types of listening activities, one where the listening activities from their course-book were used, they had to fill in the blanks and at the end of the hour, the teacher provided the answers for them to check if they were correct. The second type of activities consisted of the teacher finding a TED talk that talked about an issue related to education and watching the video in class, learners assignment was to take notes while they were listening and at the end of the video, create a summary of what they had just listened so that they could discuss what they had understood with their classmates. There was no specific structure to decide when to use one type of activity over the other, but the usual plan was to use two weeks of course-book listening and one of TED talks.

The seventh hour of the week was devoted to writing. Writing tasks were two types, the first type was related to a writing topic given by the teacher, and the practice activities ensued. For instance, in unit I paragraph structure was studied (see Appendix L), and learners had to collectively answer exercises presented on the projector. The second type was a reading report asked every unit where learners would write a report of what they had read during that specific unit in reference to the academic topic they had selected for the reading part of the class (see Appendix L).

For the eighth hour of the week, the turn came for practicing TOEFL-like tests. The first days of the course were devoted to analysing the structure of tests such as TOEFL and the way they are scored. After that, every week, there would be a different skill to be practiced, to practice these skills Gear & Gear (2005) was used. In addition to the practice of the four skills usually integrated by these types of tests, a grammar section was also used from the Barron's TOEFL CD-ROM (2001) preparation test. For the grammar section of the Barron's grammar test, the test was projected onto the board and they answered what they thought was correct. After the test was over, we started over and checked the correct answers so that they could compare their answers to the ones in the test. If there were doubts with one of the questions in the test, learners and teacher wrote it down and it was addressed next Monday during the grammatical explanation for the week or in that same moment if time allowed.

The last two hours of the week were devoted to either designing the discussions, actually carrying out the tasks that the discussion forums requested them to do, or evaluating the experience. After they had participated in the first forum, a talk of approximately two hours was given to the future teachers where aspects of forum design were explained and had to be taken into account for them to assist in the design of the next forums in which they were going to participate.

To work online during these two hours, the group needed access to computers so I booked a computer room in the university's main computer centre so that learners could have access to the device and to internet every Friday. Once there, when it was time to design a forum, students were put together in groups of four or five so that they would come up with a proposal for the following forum where they had to consider different aspects in the design such as the grammar point, the limitations of the platform (such as audio creation in the mobile app, etc.), the interaction patterns, the grading criteria, the topic to be developed, etc. After that, every team would appoint a spokesperson to present their proposal to the class, and at the end of those presentations there would be a vote over what proposal to implement.

Once the forum was designed, I assigned a period of time and opened it for learners to post their contributions, they were given the freedom to either post in the computer room or in their

homes. While they were planning their contributions, I would walk around the class offering to assist if they had any issues in completing the tasks. I urged learners to answer the forums individually so that they would start interacting within the forums and thus, foster online interaction. After carrying out all the forum tasks, the forums were complemented with a feedback session that the learners provided after the time for posting had ended, the recommendations from that feedback were integrated into the design of the following forum.

It is important to mention that within the Learning Management System (LMS), Schoology, where the course was uploaded, there were additional files that complemented the grammar explanations presented by the teacher in class, and there were also grammar activities, worksheets, etc. to help learners review or practice any grammar point they felt they still did not master, or if they had missed the class when the grammar explanation had been given. The teacher trainees had access to these additional files at all times from their computers and from their mobile phones as long as they had internet access and a smart phone (a computer centre was provided by the University). Those grammar explanations and extra activities were not mandatory course work.

3.5 Research Instruments

The concept of spoken production (see 2.5) and how it could be learnt and/or taught in an online environment through AoD shaped the structure of this intervention through collaborative action research and raised the need for instruments that would assist in collecting data for such purpose. During the different phases of this research, the following techniques and instruments were used: a) a focus group, b) pre and post speaking tests, c) semi-structured questionnaires for evaluating discussion forums, d) a semi-structured questionnaire for the end of the intervention and e) a final after-intervention interview. (see table 4 below for complete research plan and instruments)

Phase	Data Collection Technique	Instrument	Data Analysis	Purpose
Exploratory Phase Qualitative approach	Focus Group	Focus group questions guide	Inductive	Establish initial perceptions, beliefs about AoDs and feed the first AoD forum design

Phase I. Intervention Quantitative approach	Pre-test	TOEFL like Test. Gear & Gear (2006)	Deductive	Establish spoken performance scores for indicators: 1) fluency & coherence, 2) Lexical resource, 3) Grammatical range, and 4) Pronunciation
Phase I. Intervention Qualitative approach	AoD Forums Evaluation Sheets	Evaluation sheets questions guide	Inductive	receive participant feedback to improve each new forum design
Phase I. Intervention Quantitative approach	Post-test	TOEFL like Test. Gear & Gear (2006)	Deductive	Compare results with pre-test and establish difference
Phase II. Perception Qualitative approach	Course reflection survey (individual)	Survey questions guide	Inductive	Capture participant perception of teaching/learning of speaking through forums
Phase II. Perception Qualitative approach	Class final interview (in groups)	Interview questions guide	Inductive	Describe perception of using AoD for T/L of speaking

Table 4. Research Phases, and Data Collection Techniques and Instruments

As shown in table Table 4. Research Phases, and Data Collection Techniques and Instruments, the exploratory phase was carried out through a focus group and its resulting information allowed me to begin to understand the current beliefs and preferences of pre-service teachers at that time before starting the intervention. Once the data from the focus group was available, the course design began and with it, the integration of the research plan into the existing class plan. The first

part of the research was to administer a pre-test which was followed by a cycle of five iterations of discussion forums, an assessment by the participants of each of those forums through questionnaires called “evaluation sheets” and a researcher diary which was later discarded.

Each piece of data yielded by the questionnaires was used to design the next forum. It was thought these AoD forums would provide the necessary practice for learners to perform speaking-related activities and produce data that could help understand the effects of AoD forums on spoken performance. After that, a post-test was administered to analyse changes against the pre-test, then a final questionnaire of the course, and to conclude a final interview. It is important to mention that a great part of the design of the forums occurred during the intervention as feedback from each forum was analysed to be integrated into the design of the next forum in an attempt to improve it. All the instruments used, and their design will be described below.

3.5.1 Focus group

As shown above, the first part of this research was an exploratory phase with a focus group (see Appendix A for student selection criteria) conducted at the end of spring semester in 2019 with students from different semesters of the B.A. in ELT. Such phase was conducted to examine feasibility of the project and to understand attitudes, perceptions over the actions the study was proposing.

In order to conduct this focus group, after receiving permission from the Ethics and Research Governance Online or ERGO, number 47806, and from the gatekeeper, e-mail requests were sent to teachers of the English subjects at the BA in ELT. The messages presented the project to the professors and requested permission from them to invite their students to participate in a focus group for the purposes intended. At first the teachers presented the project to their students but there was not a sufficient response. After that, I asked the professors for some minutes of their time to visit their classes personally and make the invitation. Upon receiving the approval, I then visited the groups and invited them to participate. I explained the general purpose of the study, I mentioned that participation was entirely voluntary, that participants could withdraw at any time with no penalization, and that all personal information would remain anonymous and confidential. After this in-person invitation, ten learners agreed to join the focus group.

The ten participants, five from second semester and five from fourth, and researcher got in contact via e-mail and organized a time and place within the university to conduct the interview (see Appendix B). They were given a consent letter and a letter explaining the purpose and nature of the research for them to read, and if they agreed, to sign and bring to the focus group. When they arrived to the interview, they were asked if it could be recorded to which they consented

and were reminded that they could withdraw at any moment without any penalization. One of the participants withdrew approximately ten minutes before the end of the interview due to a personal emergency but submitted her signed consent before leaving, so did the rest of the participants.

From the attending group, all mentioned liking technology, two mentioned being highly proficient with technology, six said they had an average knowledge and two indicated a low proficiency with technology. In addition, seven mentioned having a high skill in spoken production, two reported an intermediate and one self-described as having a low skill. After data was obtained and analysed from this focus group (see Appendix P), the next step was to think about how the ideas that arose from the theory and from the focus group could be implemented in order to design the first forum that was used during the intervention.

3.5.2 Pre and Post Tests

A TOEFL style test from a TOEFL preparation book by Gear, and Gear (2006) was selected as it measures different English language proficiency skills, speaking being one of them. The specific tests chosen, within the speaking section (see Appendix II), provide enough practice for speaking material to be created by participants for subsequent analysis using different indicators of the spoken production skill, commonly referred to as speaking skill. For this study, fluency and coherence, lexical resource, grammatical range and accuracy, and pronunciation were considered and used as they provide a wide variety of linguistic spoken features. In order to analyse these linguistic indicators, the speaking rubric by IELTS (see Appendix DD) was used as it allows to focus on more indicators of spoken production than does the rubric used by TOEFL.

In order to analyse these spoken production indicators, it was important to define them as presented in 2.5.1, Herrera Díaz, and González (2017) adds to the understanding of the concepts through the definitions given by IELTS:

Fluency and Coherence is the ability to talk with normal levels of continuity, rate, and effort and to link ideas and language together to form coherent, connected speech. The key indicators of fluency are speech rate and speech continuity. The key indicators of coherence are logical sequencing of sentences, clear marking of stages in discussion, narration or argument, and the use of cohesive devices (e.g., connectors, pronouns, and conjunctions) within and between sentences. (ielts, 2007, p. 12)

Lexical Resource makes reference to the range of vocabulary the candidate can use and the precision with which meanings and attitudes can be expressed. The key indicators are the variety of words used, the adequacy and appropriacy of the words used, and the ability of circumlocution (get

round a vocabulary gap by using other words) with or without noticeable hesitation. (IELTS, 2007, p. 12)

Grammatical Range and Accuracy refer to the range and the accurate and appropriate use of the candidate's grammatical resource. The key indicators of grammatical range are the length and complexity of the spoken sentences, the appropriate use of subordinate clauses, and the range of sentence structures, especially to move elements around for information focus. The key indicators of grammatical accuracy are the number of grammatical errors in a given amount of speech and the communicative effect of error. (IELTS, 2007, p. 12)

Pronunciation is the ability to produce comprehensible speech to fulfil the speaking test requirements. The key indicators will be the amount of strain caused to the listener, the amount of the speech which is unintelligible and the noticeability of L1 influence. (IELTS, 2007, p. 12)

As mentioned, only the speaking section of the TOEFL-style tests was used and it is what I will be referring to when mentioning PRE and POST tests for the purposes of this thesis. The tests were selected because of the participants familiarity with TOEFL tests and their format, this was thought would reduce their test anxiety. The speaking section of this test (see Appendix GG) is divided in six parts, the first two parts being independent tasks and the last four being integrated tasks. The first two sections, or independent tasks, dealt with questions that could be answered with previous knowledge from the participant or anything that the learner could think about in that moment, from parts three to six, participants had to either read a text or listen to an audio or lecture and then answer questions posed by the test where they had to explain what they understood or give their opinion of the information they had just read, these are known as integrated tasks (see Appendix II).

The pre and post-tests speaking sections were taken from different tests of the same book so as to avoid students improving due to rehearsal. The pre-test (see Appendix GG) was obtained from page twenty-eight, the speaking section of the book's diagnostic test. The post-test (see Appendix HH) was taken from the speaking section of practice test number two on page 512 of the same book.

For the analysis of pre and post-test scores (see 4.1.1, and 4.1.2), basic descriptive statistics were used since, as stated by (Burns, 2010), "In AR [Action Research], we are much more likely to be using descriptive statistics than complex inferential measures, statistical packages or correlation procedures." She also explains that descriptive statistics is used in two main ways, the first is measuring central tendencies which indicate where the data collects around a central point and the second way is dispersion which indicates how numbers spread across the data set (Burns, 2010 p.121). For the analysis of the pre and post test data, central tendencies were included.

Burns explains that central tendencies are three different averages called mean, median and mode. To obtain the *mean*, the author indicates to “look at a set of numbers you had collected, add them up and then divide the total by the number of items, you would end up with the mean, or average.” For the case of the median, she adds that this is “what comes in as the middle point in a set of numbers arranged from the smallest to the largest. We use the median if we want to show the central point in a range of scores.” Burns continues her explanation with the last average, referred to as mode, which is “is the number you find most frequently in the set of scores – we can think of it as the most ‘popular’ or modish number in the set!” (Burns, 2010)

Furthermore, the author explains that the second way of using descriptive statistics is called dispersion (or variability) and that there are two ways of showing dispersion, one is range and the other one standard deviation. Burns elaborates that range “gives you the spread across all the numbers you have. To calculate the range, you identify the largest and smallest numbers, then subtract” and that “when we calculate the standard deviation (SD) we are getting an average of the distance of each score from the mean ... The SD tells you how each score deviates on average from the mean” (Burns, 2010). The standard deviation was also obtained for this study.

3.5.2.1 Test Administration

The speaking sections of the abovementioned TOEFL-like tests were uploaded to a platform called Schoology (see Appendix JJ) by the researcher and were organized as a series of tasks to be completed by the participants. Unlike a usual TOEFL test, they did not have a limited time to finish but rather, they could use the asynchronous nature of the LMS to upload their oral answers.

Each participant had to individually log in into Schoology, the educational platform, and access to both pre and post tests, then open each one of the six parts of the tests, read the instructions and upload their answers to each one of the six tasks (see Appendix GG and Appendix HH)

Students read the instructions from the test and recorded themselves with either their cellular phones, a web page called Vocaroo provided by the teacher or any other recording software they had available and were asked to upload those files onto the platform as evidence of their spoken performance. All students were asked to do these activities individually and were graded on their production as part of their class grade in the same way the data was later analysed for the purposes of this research study, namely, using the IELTS rubric to give them feedback.

Before taking the test, participants were explained each part of the test format. They were told that there would be no time limit and the type of devices they could use in order to upload their files. The pre-service teachers were also told that it was important to upload files not hyperlinks

as these usually expire after a certain amount of time and this could make the retrieval of information for analysis difficult.

The researcher requested a computer centre room from the University for the pre-test, and took the candidates to that room so as to observe how the students performed the oral tasks set out in the exam. For the post test, learners were asked to take the test in a specific day and time but they were not assigned a specific place, that is, this time they were not asked to go to the university's computer centre but were able to do it if they decided to, nobody went to the centre, all the participants decided to do it home. All the audio files generated by the learners were uploaded to the platform where they could be retrieved easily by the researcher at a later time for analysis.

3.5.2.2 Test Rating

Once the intervention was over, the researcher retrieved all the audio files and organized them by pre or post test, then by parts one through six and finally by participant (see Appendix V). As stated above, the rubric selected for the analysis of the audio files generated by the candidates was the IELTS rubric (see second picture in Appendix V) for speaking because it is the one that allows to focus on the four aspects of spoken production previously mentioned, the first being fluency and coherence, the second one being lexical resource, the third grammatical range and accuracy, and the fourth and last one being pronunciation. These aspects of spoken production are in line with the most commonly studied aspects of oral production in AoD literature, complexity, accuracy, and fluency (CAF) Tecedor & Campos-Dintrans (2019). The same authors describe each of those measures as:

Complexity, commonly defined as the ability to use a wide and varied range of structures, has been operationalized in terms of formal (e.g. range of word types, number of word families) and functional (e.g. number of words, clauses, or subordinate clauses per T-, C-, or AS-unit) features. Accuracy is characterized as the ability to produce target-like language; that is, error-free production. It has been measured both in terms of specific measures (e.g. percentage of target-like verbal morphology, use of plural or gender markers) and in more general terms (e.g. percentage of error-free clauses, errors per 100 words). Finally, fluency is defined in the literature as ease of production, and in studies of speaking performance it has been measured in terms of rate of speech (e.g. syllables per minute, number of pauses, length of pauses) or dysfluencies (e.g. number of false starts, repetitions, reformulations.) Tecedor & Campos-Dintrans (2019: 5)

The IELTS rubric (see Appendix DD) contemplates these three measures (CAF) with complexity being comparable to the grammatical range, but which also includes lexical and pronunciation range. Other rubrics including the TOEFL test rubric for speaking assess the spoken contributions

of the candidates in a more general manner and do not allow the raters to focus on the specific CAF indicators of speaking.

Thirty-seven participants took the pre and post-tests since they were part of the intervention group and there were no specific criteria for selection. However, one participant did not submit his signed consent so his data was therefore not contemplated for this study. Three participants did not submit the post test, one of them was the participant not included. The audio files from the pre-test were organized and were rated according to each one of the areas that the IELTS rubric shows. This means that six contributions for each one of the thirty-seven candidates were analysed for the pre-test. 214 audio files of approximately one minute each were submitted by the learners and analysed by the researcher. Although one participant did not give his written consent, his audio files were analysed as part of the class but not included in the study.

The same process was performed for the post-test. However, in this case three participants did not submit the test, one whose consent was not submitted and two more who were included in the study but did not submit; their grades were not considered for obtaining averages. From those included, six participants did not submit all the parts of the post test, although the majority did. This meant that six audio contributions of twenty-eight candidates, five of three candidates, four of one, three of another one and two of one participant were analysed for the post-test. One hundred and ninety-two audio files of approximately one minute each were submitted and later analysed and rated by the researcher for this post-test. All scores were organized in a MS Excel file (see Appendix W) and divided by each spoken production indicator as shown in the IELTS rubric.

3.5.2.3 Rater Reliability

In order to maintain reliability, an external rater, a Cambridge First Certificate certified teacher trainer who was available at the time was asked to also rate the audio files so as to compare the rater's grades with the points assigned by the researcher for both the pre test and the post test. The first activity carried out was to calibrate our understanding of the rubric by getting together and rating one participant in both pre and post tests to verify that we agreed in our understanding of the indicators in the rubric. After that, both the researcher and the external rater obtained the scores for both tests, refer to the Figure 3. Interrater assessments for pre-test below for interrater assessments for the pre-test. The following chart shows the differences in scores assigned by both raters. There is similarity in rating but a difference in scores, the blue line represents the researcher score and the red line the external rater score.

To overcome this score discrepancy, after a discussion over the considerations that the external rater was giving to the test and the ones of the researcher, this being that the researcher considered more the asynchronous nature of the test whereas the external rater was

contemplating a more immediate or synchronous nature to taking a test. Finally, there was an agreement on the grade to be assigned, the decision was to obtain an average of the results to include both parties' opinions. The following graph shows with a green line the average obtained between the scores assigned by the researcher and by the rater.

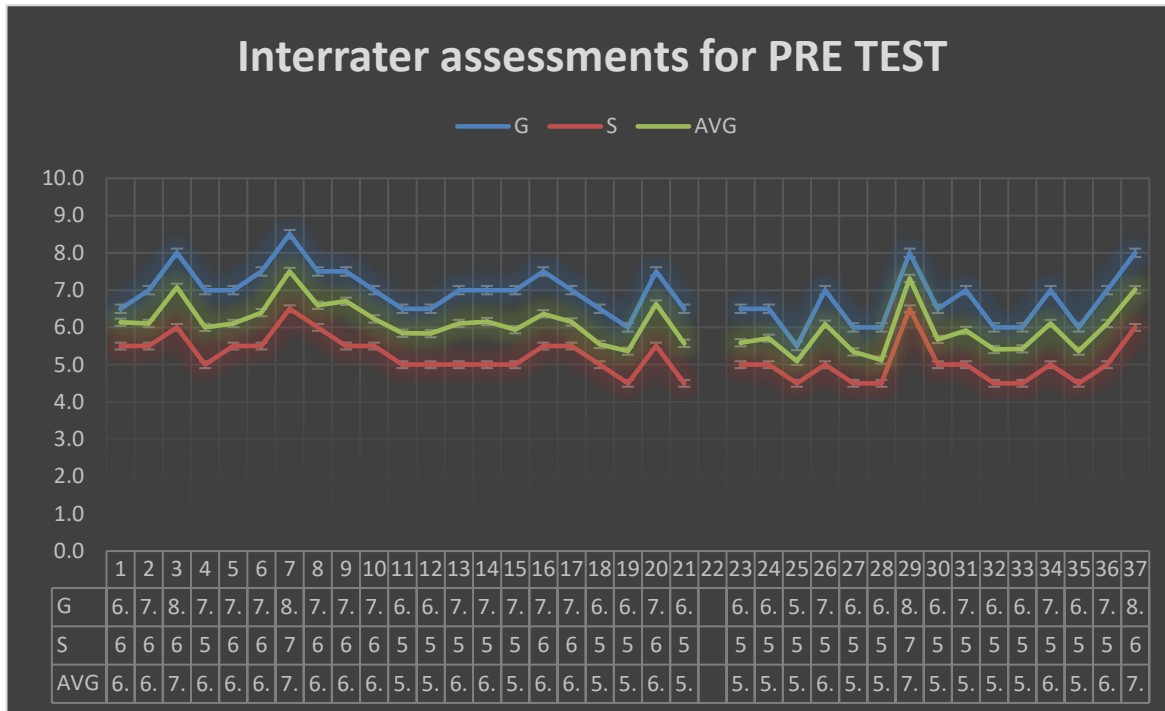


Figure 3. Interrater assessments for pre-test

Once the results were obtained, considering the average of the two raters' scores, the data was rounded to whole numbers or half numbers as it is usually performed by IELTS Cambridge raters as well as being the way that IELTS presents its scores to candidates who take its tests.

The same process was followed for the post test obtaining a similar pattern of rating with score difference and all the data was organized in the same MS Excel file as the pre-test scores (see Appendix W). An average for the two scores was again considered (see Figure 4. Interrater assessments for POST TEST below).

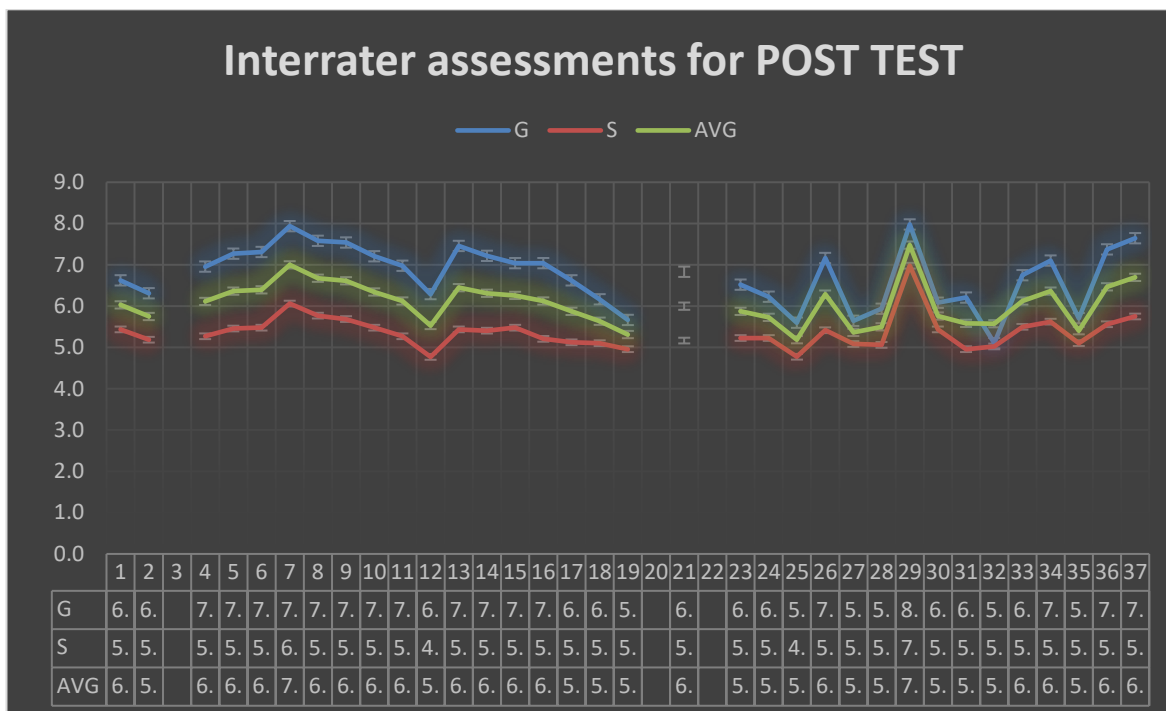


Figure 4. Interrater assessments for POST TEST

3.5.3 Forum Evaluation Sheets

After the exploratory phase had finished, and the pre-test had been administered, the beginning of the intervention ensued. The researcher used the information obtained in the exploratory phase and literature on voice-based asynchronous discussion forums to design the first discussion forum (see Appendix D) for participants to answer.

The purpose was for them to experience a text-based forum that included an informed design and to obtain feedback from them after answering the forum. The instrument designed for obtaining feedback data was a questionnaire, named for the purposes of this study “Task Evaluation Sheet.” Dörnyei & Taguchi, (2009) explain that questionnaires “tend to have few open-ended questions and even the ones included are relatively short, with their “openness” somehow restricted.” Thus, the design of the questionnaire was conducted together with research tutor through a series of iterations creating and modifying questions that could capture participants perceptions of their experience with AoD forums in a way that this data could provide information for the design of the following discussion forum. In the end, five questions that restricted the answers to perceptions of the forum tasks to perform but fostered reflection both as a learner and as a pre-service teacher were developed (see Appendix M.)

After every forum, the next day, participants were asked get in groups of four or five students in class and discuss about their experience with the forum, to talk about that they had liked or disliked and then a spokesman for every group shared with the class their conclusions. After that,

they were asked to answer this evaluation sheet (see Appendix M) individually and to upload it to the researcher educational LMS for subsequent analysis.

3.5.4 Final Course Reflection Questionnaire

The final reflection questionnaire is one that is part of the pre-service teachers coursework requested as a reflection of what they learn in their class. It is divided in the different skills that the course seeks to develop in them; namely, reading, writing, listening, speaking, vocabulary and grammar. This is a predominantly grammatical course, but in this questionnaire that they received (see Appendix X), they have a section to reflect on how they learned the speaking skill, which is of interest for this study. The information presented in that section is useful to understand the effect that AoD forums had on the development of their spoken production.

3.5.5 Final Interview

This was a semi-structured interview also developed so as to try to capture the most possible perceptions of their participation in this project but at the same time intending to keep participants on topic with the questions (see Appendix O).

3.6 Research Participants

Participants in the focus group of the exploratory phase were ten undergraduate pre-service teachers in their second and fourth semesters. Five were in second semester and five in fourth. They all reported to like technology and six having an intermediate proficiency in its use while two reported low proficiency and two more a high proficiency in the use of technology.

For the intervention, a different group was invited. An English course group of thirty-seven pre-service teachers, 28 women and 9 men from the Bachelor of Arts in English Teaching program from the Universidad de Sonora participated as the research subjects although only the data of thirty-six of them was used since one of the participants, accepted verbally, but never submitted a signed consent to participate. Some of the BA in ELT pre-service teachers have been educated in bilingual schools or schools with English programs, there are others who have not had that much contact with the English language, and some others who have had a high contact with English due to the proximity of the border with the USA or because they have lived in the USA. Thus, there are students who have a highly developed speaking skill while others do not.

This study involved researching the perspective of pre-service teachers from different ages, the majority, however, are between eighteen and twenty-three years old. Many of the learners are

women; for example, in English IV, the level considered for this study, out of thirty-seven participants, nine were men, and twenty-eight were women.

In Mexico, to become an English teacher, learners have to study a bachelor's degree for four years where they have to also comply with a social service and professional practices as is the case with the place where this study occurred. This study was conducted with such teacher trainees who were studying their fifth semester in the Bachelor of Arts in English Language Teaching program and who were enrolled in the English IV course of their curriculum and who had not undertaken their professional practice yet. By the time the learners are in that stage of their major, they are expected to have a higher intermediate level of English, or a B2+ in terms of the CEFR.

Five participants from the complete class were selected so as to represent the group and to observe changes after being exposed to voice discussion forums. The criteria considered for such purpose was a combination of participants' self-perception of shyness or extroversion, being exposed or not to English in their early years up to high school, and whether test scores showed a high speaking or low speaking skill. See chart below where number one indicates the participant showing the criterion and no mark indicates its absence.

	SELECTION CRITERIA (COMBINATION BETWEEN SELF-PERCEPTION AND OBSERVATION)						SPEAKING TESTS		
	INTROVERT	EXTROVERT	ENGLISH IN YOUTH	NO ENGLISH IN YOUTH	HIGH SPEAKING	LOW SPEAKING	PRE	POST	Difference
Juan	1		0.5		0.5		5.9	6.3	0.3
Catalina	0.5	1	1		1		7.5	6.9	-0.6
Sharon		1	1		1		6.4	6.1	-0.2
Jazmin	1	0.5	1			1	5.8	5.5	-0.3
Gerardo	1			1		1	5.1	5.2	0.1

Table 5. Criteria for selecting individual participants of interest.

3.7 Ethical Considerations

As I collected data from human participants, there were several ethical issues that had to be considered. All these procedures were conducted in accordance with the ethical guidelines provided by the University of Southampton's Faculty of Arts and Humanities which were current at the time and were also discussed with the person who was head of the Department of Foreign Languages of the Universidad de Sonora (gatekeeper) at the time of the study. Authorization to conduct the study was granted (see Appendix Q).

As for the first part of this study, the focus group, in accordance with procedures in place in the University of Southampton, first the ERGO (Ethics and Research Governance Online) authorization was obtained in the spring semester of 2019 with ERGO number 47806. This allowed me to approach learners from two different semesters via their teachers and then personally to invite them to participate on a focus group. Participants in the focus group as well as in the main study were presented with two written documents, the Information

Sheet and the Consent Form to sign if they accepted to participate as volunteers in the study. Those who did not want to participate could simply opt to return both documents.

The study itself was authorized with ERGO number 52185 after all the required documents were presented and revised by the ethics committee and corresponding authorities of the University of Southampton, the request was approved before the beginning of the fall semester in 2019.

Therein, the dates and instruments for data collection were discussed.

For the case of the Universidad de Sonora, the documents created for the University of Southampton were presented to the head of the Department of Foreign Languages and the intention and instruments to be used were discussed. After that, the head of the Department issued a letter authorizing the research with only the English IV course that the researcher was also going to impart (see Appendix Q).

In general, and taking into consideration the recommendations by Creswell (2003: 71), participants were informed of the scope of the research, of the possibility of leaving the project at any time, they were assured that their personal information would be anonymous and remain confidential, and that the information from this study would be available to them if they requested it. They were given a week to decide whether or not they wanted to participate in the research, after that, they all accepted, and all signed their consent except for one (who accepted verbally but never submitted the consent).

3.8 Role of the Researcher

Bearing in mind that as stated by Hinkel, (2011: 237) “the concept of action research has developed rapidly in the field of applied linguistics and second language teaching from the end of the 1980s, influenced in no small part by the “teacher as researcher” movement”, this action research study intends to help in the understanding of how the teaching of learning or spoken production can be affected by a specific practice in the classroom by a teacher/researcher. Moreover, the same author adds that “action research has come to be seen as a means for teacher practitioners to be engaged in self-reflective and investigative approaches to understanding and researching their working environments.” In other words, Hinkel, (2011: 239) mentions that social change through action research tries to move “from the more abstract and decontextualized theorization of experimental scientific research to pragmatic, real-world problematization, redefining the role of the researcher.”

For this research, it is important to mention that I function as both the researcher and the pre-service teachers’ instructor. This poses several challenges as the participants might tend to tell the

researcher, because of the double function, what he wants to hear so as to keep good grades in their class. In order to try to mitigate this power relationship present, there were several actions undertaken. One of them was to include a final interview, after the course was over and when their grades had been posted and could not be modified, another action taken was to assure the learners that all activities were part of the class and that they did not have to do any additional work as this would have deterred some of them from participating.

Furthermore, in terms of grades for the forums, they were given explicit points to cover in advance before actually doing the activity, which if carried out correctly offered them the full grade for that assignment reducing the subjective element of grading. Participants were not given extra points for designing the forums or for their designs being used, they were given a class mark for their participation in the forums using the abovementioned IELTS rubric, and a mark for submitting their evaluation sheets as feedback for every forum. It is important to mention that for the forum a full grade was awarded, and participants were informed, for the simple fact of posting according to the instructions set out in the same forum, they were not graded in terms of linguistic performance, seeking to reduce the anxiety produced by their performance in the voice posts; likewise, they were awarded a full grade for their forum evaluation sheets just by submitting the assignment, the intention there was that they felt they would not be penalized if they wrote something negative or they felt the researcher did not want to hear.

The above influenced the design of the research in the sense that interviews were first conducted after each forum but was later decided to complement forums with a written survey; thus, the information could be compared against the data of a final interview after all the course was over in order to analyse if there were different opinions presented. Although participants may be inclined to tell teachers what they want to hear during the actual course, once it is over, the information they provide can prove to be, at least to a certain degree, free of bias or more honest.

3.9 Data Collection

After the different considerations previously explained, the collection of data was planned and conducted in the fall semester of 2019 with 36 pre-service teachers from the English IV class, taught during the fifth semester of a total of eight, in the Bachelor of Arts in English Language Teaching program. The complete class was invited to participate in the study, and all thirty-seven learners enrolled in the class accepted to participate. One of them however, although verbally stated acceptance to participate in the project, did not submit the consent and such data was not considered for the subsequent analysis.

The first data collected was from an exploratory phase where qualitative data was obtained through a focus group that was conducted to know the opinions, preferences and experiences a group of English teacher trainees from the Bachelor of Arts in English Teaching at the Universidad de Sonora. This was conducted in the spring semester of 2019 with learners from second and fourth semester.

In the actual research, for the case of qualitative data, it was obtained first in the form of contributions to the discussion forums (see Appendix D, Appendix E, Appendix F, Appendix G, and Appendix H), the first discussion forum provided written posts from participants, the second forum provided audio contributions, the third provided audio-visual (video) input by the participants, in the fourth and fifth forums, participants were given the option to use either voice or video. Text was not presented as an option in the last two forums as the intention of this research was to observe the effect on spoken production.

After each forum, learners were given a forum evaluation sheet (see Appendix M), this also provided qualitative data. Then, the researcher voice diary also provided qualitative data. At the end of the course, there was another questionnaire which dealt more with an assessment of the course in general, but there was a specific part on spoken production (see Appendix X).

Finally, after the course was over, they were asked to participate in a group interview (see Appendix O) with groups of maximum 5 participants. All of the participants in the class were invited for a final interview, out of the 36 participants, 30 participated in the interview and the missing six explained that they had to leave to their hometowns, and it was therefore not possible to fix a schedule where they could meet the researcher for an interview. This interview was recorded so as to code their comments for later analysis.

The time frame for data collection from the research study was from August twelfth to December sixth, 2019. The first data collected from the actual study was the speaking pre-test, this was conducted once we had discussed what the research was about and they had taken at least 5 days to think about whether they would like or would not like to participate in the study and after they had submitted their consent and we had discussed the contents of the course and prepared the digital tools to have the pre-test. The actual pre-test (see Appendix GG) was administered on Friday August 23rd, 2019. The post-test (see Appendix HH) was administered at the end of the course on December 3rd, 2019 as this could provide a sense of the progress in terms of any feature of spoken production (see Appendix DD) of the participants and could provide quantitative data to be compared with a pre-test at a later date.

3.10 Data Analysis

The researcher used a qualitative analysis through exploratory coding and clustering of emerging themes to understand opinions and beliefs of learners. For quantitative data the IELTS rubric for speaking was used and results organized in tables using MS Excel. The video recordings from the focus group and the final interview were transcribed and analysed using Windows NVivo release 1.3 (535). NVivo is a specialized software intended to assist qualitative and mixed methods research, designed to help researchers analyse, organize and find perspectives in non-structured or qualitative data. A chronological account of how data was collected and analysed is presented next.

The first set of data collected was from a focus group in an exploratory phase. Three videos with a total time of 106 minutes and 46 seconds of play time were obtained. This qualitative information was transcribed and coded by repetition of emerging themes until saturation, analysed occurred before the fall semester of 2019 began as it informed the design of forum design (see Appendix P). In general, they showed negative perception towards discussion forums.

The first quantitative data came in the form of a speaking pre-test where 214 audio files of approximately one minute each were submitted by the learners. This data was analysed by using the IELTS rubric for speaking (see Appendix DD) but considering the qualitative features of spoken production scale offered by the CEFR (see Appendix R) in search of indication of change on aspects not considered in the IELTS rubric and a grade based on the rubric was assigned to the participants (see Appendix KK).

The contributions in the discussion forums designed where 220 text posts corresponded to forum one, 227 audio posts of about 20 seconds each for forum two, 91 video contributions of about 40 seconds each for forum three, 108 audio posts of about 30 seconds each for forum four, and 98 audio posts of about 40 seconds each for forum five correspond to qualitative data. Each forum voice contribution (except for the first one) was analysed for compliance with forum instructions only and thus not integrated with the rest of the data.

Forum questionnaires or “evaluation sheets” part of a cycle where learners would answer questions to provide feedback to the discussion forums in which they had participated, cycle they repeated four times producing a total of 169 “evaluation sheets” (see Appendix MM). At first each evaluation sheet was being uploaded to Nvivo individually, but after looking for a more organized manner of integrating the information, the evaluation sheets were collected and exported into .pdf files, then organized and joined into a single large .pdf file and imported into Nvivo software in its release 1.3 so as to be analysed qualitatively with the rest of the data.

A researcher voice diary which comprises five audio files of approximately one minute each was obtained. This information was transcribed and imported into Nvivo software in its release 1.3 to be analysed qualitatively but due to the lack of consistency in periodicity of the reflections it was discarded (see Appendix NN).

A speaking post-test where 192 audio files of approximately one minute each were submitted by the learners. This quantitative data was analysed by using the same scale used for the pre-test and a grade was assigned to the subjects (see Appendix LL) so as to compare it with their initial pre-test. The grades for both pre and post tests were assigned by the researcher and by an external rater to increase reliability of results. After the results were obtained, descriptive statistics was used to obtain the “mean”, “median”, and “mode”. See 4.1 for results.

With the objective of further verifying the pre and post test results, a dependent t-test from inferential statistics was utilized. Riazi, (2016) states that a dependent or paired-samples t-test “is a parametric test, which is used to compare the means of two dependent or matched groups to find out if they are significantly different”, he adds that it “is used when the two groups whose means are to be compared are not independent of each other, such as in repeated measures designs”.

Before conducting the t-test, four common assumptions for dependent t-tests were considered and met. The first was that my dependent variable was measured on a continuous scale. The second one, that my independent variable consisted of two categorical “matched pairs”, namely that the same subjects were present in both groups. The third was that there were no significant outliers in the differences between the two data sets. The fourth and final assumption was that the distribution of the differences in the dependent variable between the two data sets was approximately normally distributed Laerd Statistics (accessed 2023). See 4.1 for results.

A final course reflection was asked from the learners at the end of the course where 30 students submitted the document (see Appendix N). In this case, each of the surveys was uploaded individually and the analysis focused on any comments related to the development of speaking or the experience or effects of the forums and coded accordingly. The files were imported into Nvivo software in its release 1.3 for qualitatively analysis with the rest of the data (see Appendix OO).

The last piece of data was a final interview with 30 out of the 36 participants, they were asked to come to the interview in groups or maximum five people, the participants were interviewed in four groups of five people, two groups of four people and one group of two; this provided 371 minutes and forty seconds of video. This information was transcribed and imported into Nvivo software in its release 1.3 and analysed qualitatively together with the rest of the data (see Appendix PP).

The above last interview was conducted after the course had ended, this was with the purpose of making participants feel more at ease since some of them consider that saying something negative or contrary to those whom they see as their teachers, could affect their grades negatively. They were reminded that no opinion or perspective in any part of the intervention from their part could have negative effects on their grades, including this final interview. Thus, it was conducted after all participants had finished their course and already had their final course grades.

For the coding of the information, first all the files were imported into Nvivo and an exploratory analysis ensued identifying emerging themes that had appeared in the literature reviewed up to that moment and coding similar themes together until reaching saturation in an attempt to integrate all the data into the analysis (see Appendix QQ).

Chapter 4 Impact of Discussion Forums on Spoken Language

This is the first of two chapters presenting the analysis of data obtained for the present study. Chapter four provides details of the overall learner experience of the group as a whole, which was documented through different instruments used and later coded in Nvivo release 1.7 (see Table 4. **Research Phases, and Data Collection Techniques and Instruments** in Methodology). The first part of this chapter presents data collected from the pre and post-tests (see 3.5.2) of spoken language performance administered to the participants, and the second part presents the information obtained from the analysis of the group as a whole. After that, chapter five presents an analysis of the data pertaining to the five key participants. Except for the focus group, in each case, data will be presented according to the themes and subthemes identified and coded in Nvivo release 1.7. (see Appendix QQ).

4.1 Spoken Performance Pre and Post Tests

Data from a comparison of mean, median, and mode point scores between the pre and post-test scores revealed no significant difference. The patterns underlying test scores are interesting although not statistically significant. Nonetheless, a greater difference can be observed when participants are explored individually where data pertaining to the five key participants shows a greater complexity that is not perceived in these scores.

The lack of change in pre and post-tests is not surprising since participants are learners who have already undertaken three English language courses of a total of five in their undergraduate studies; they are on their fifth semester of their BA in ELT curriculum (see Appendix S) and have only one more English language course remaining which is focused on academic writing. This was not a surprising result since it was an evolving project where at the onset it was thought that the slowed conversation provided more planning time for the speaking tasks and, according to the Cognition Hypothesis (see 2.3.2), this could assist in developing accuracy and complexity; results show that there was an improvement but a limited one. Both pre-test and post tests were graded using the same IELTS rubric (refer to section 3.5.2). Results for pre and post tests are discussed below.

4.1.1 Pre-Test

Pre-test scores show that as a group, their IELTS level mean average was, once rounded, 6.0 which, if the IELTS conversion table for CEFR is used, places them in a B2. This is consistent with

what is expected from them in their bachelor degree studies. All three data central tendencies mean, median and mode resulted in a six point zero, see table below.

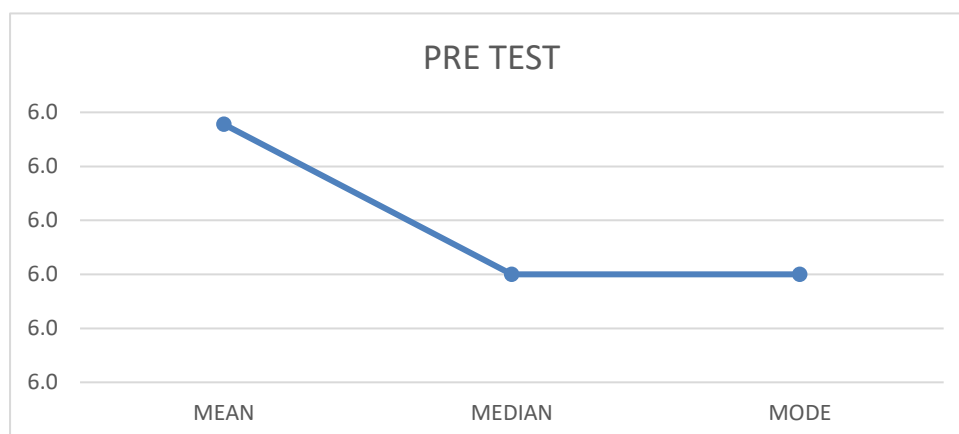


Figure 5. Pre-test mean, median and mode averages

See charts below for group pre-test scores and a conversion table (see Appendix T) used by IELTS for matching scores to the Common European Framework of Reference for Languages (CEFR). Note that for the pre-test, participant twenty-two does not show data as there was no written consent from the part of this person to use the data generated. That piece of data was omitted for calculating averages. Two-hundred and eight audio files were submitted for this test. Thirty-one participants (86%) submitted six audio files, four (11%) submitted five audio files, one (2.7%) only uploaded two audio files. All these audio files were rated with the IELTS rubric by both raters (see 3.5.2).

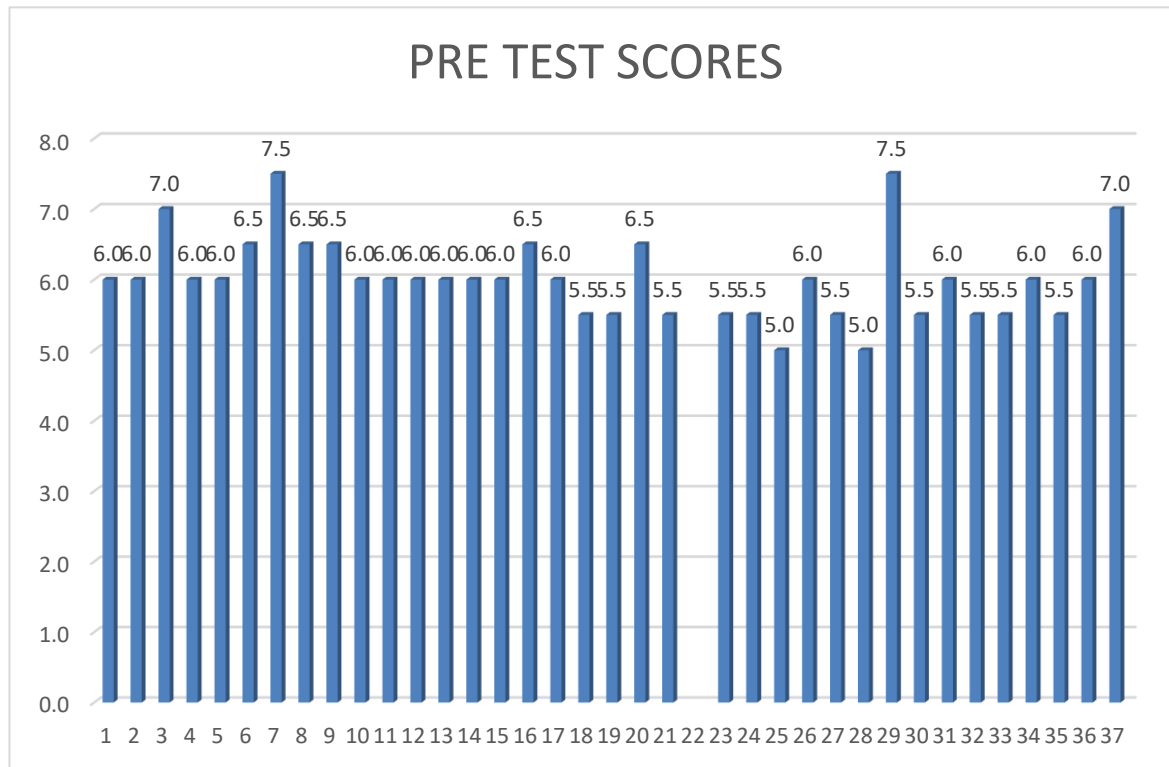


Figure 6. Pre-test scores by participant

4.1.2 Post-Test

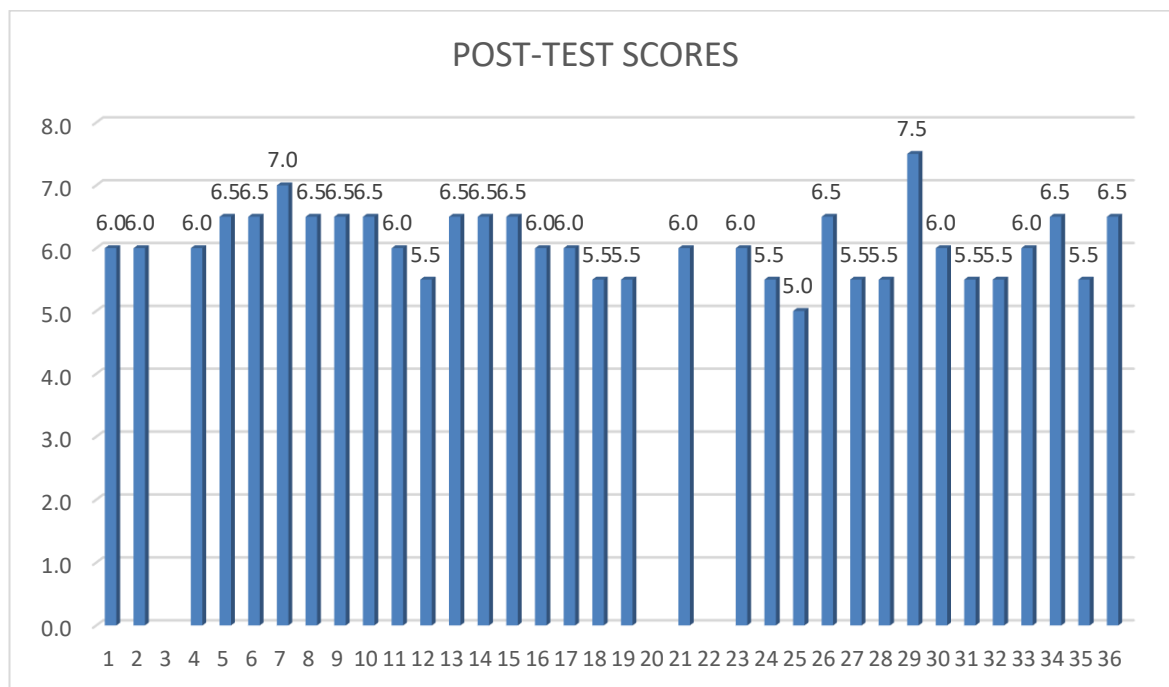


Figure 7. Post-test scores by participant

After eliminating those who did not submit, the calculations were performed for post-test scores (see Figure 7. Post-test scores by participant). The graph below shows that in the post-test scores,

as a group, the IELTS level mean average was 6.1 (rounded to 6.0) which, if the IELTS conversion table for CEFR is used (see Appendix T), also places them in a B2. The median remained unchanged with a 6.0 and the mode did show an increase from 6.0 into a 6.5 meaning more participants scored a 6.5 on the post-test even if there were two participants who did not submit. Out of the thirty-four participants who did submit, thirteen of them (38%) increased 0.5 points, out of those, eight (62%) increased from 6.0 to 6.5 in the post-test. Conversely, five participants (15%) scored 0.5 fewer points in the post-test. Sixteen participants (47%) scores remained unchanged (see Appendix U).

The following graph shows that there is a very slight improvement from the pre test to the post test of only 0.1 points in the mean average which could be explained by the difference in test conditions. During the pre-test, participants were supervised, given a specific date and time, and used university facilities to answer their test. In the post-test, however, they took the test at home or wherever they decided to do so with a specific date but not a specific time of the day. The time of the test compared to their responsibilities could also have been a factor since the pre-test was administered during the beginning of the semester where participants had few assignments from all their other subjects and the post-test was administered during the final assignments of their semester. Median remained the same, but mode showed a larger change, this could be explained by the slight increase observed in the post test by participants with lower scores in the pre test (see Appendix U).

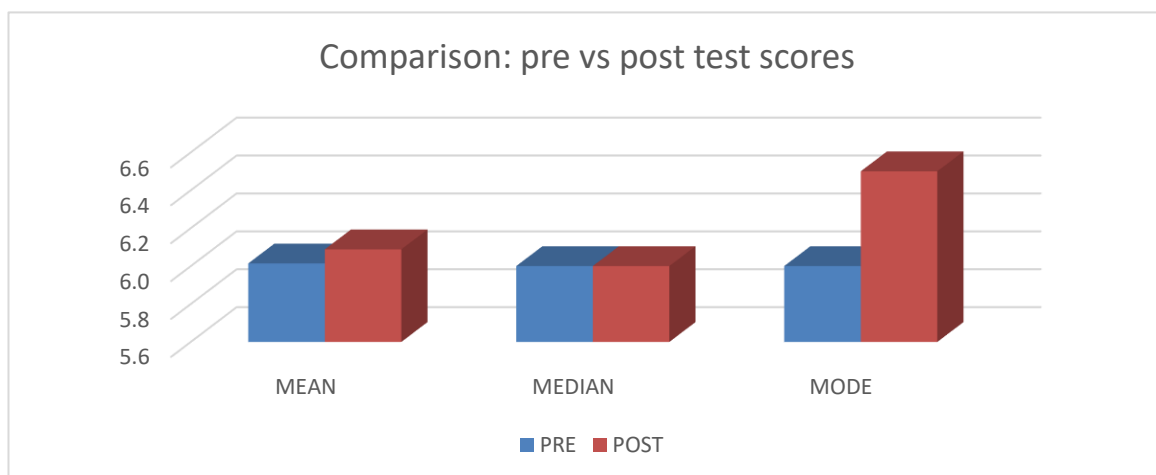


Figure 8. Differences between mean, median and mode from the pre and post tests

The bar graph below shows the difference in scores between both tests. The blue bars correspond to the score for the pre-tests and the red bar corresponds to the post-tests. In general, there does not seem to be much difference, but when the graph is explored in detail, it can be observed that ten out of the thirteen participants who show improvement are those who state that they

perceive themselves as having a more “introverted” personality, they describe themselves using different words such as shy, serious, or introverted.

The word “introverted”, when used in Spanish, generally has a more similar meaning to “shy” than to “introverted” in English, and it is the sense in which it is understood for the purposes of this chapter, it is by no means used as a technical term but rather a representation of how participants describe themselves. For those who did not identify as introverted, or did not say, out of twelve in total, three showed an improvement of 0.5 points whereas one showed a decrease of 0.5 points, the rest remained unchanged (see charts below).

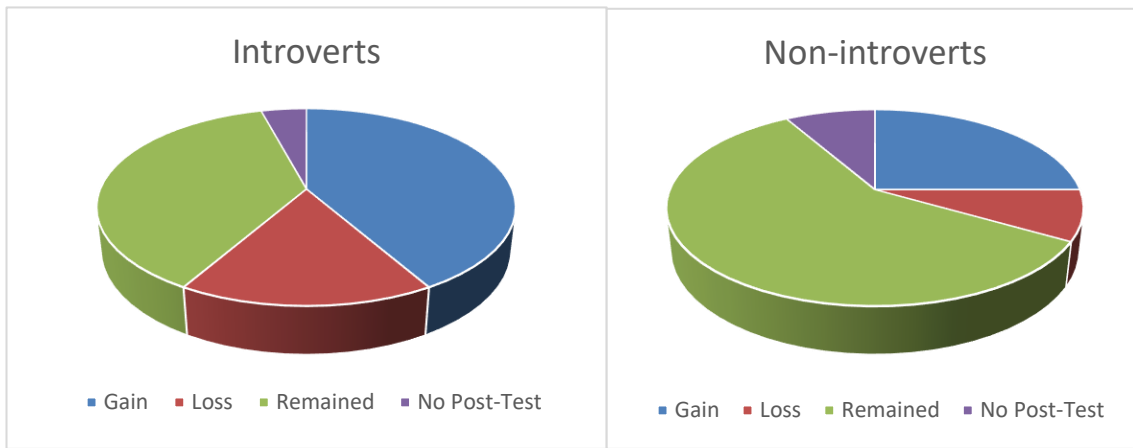


Figure 9. Comparison of test variation between participants self-perceived as introverts or non-introverts

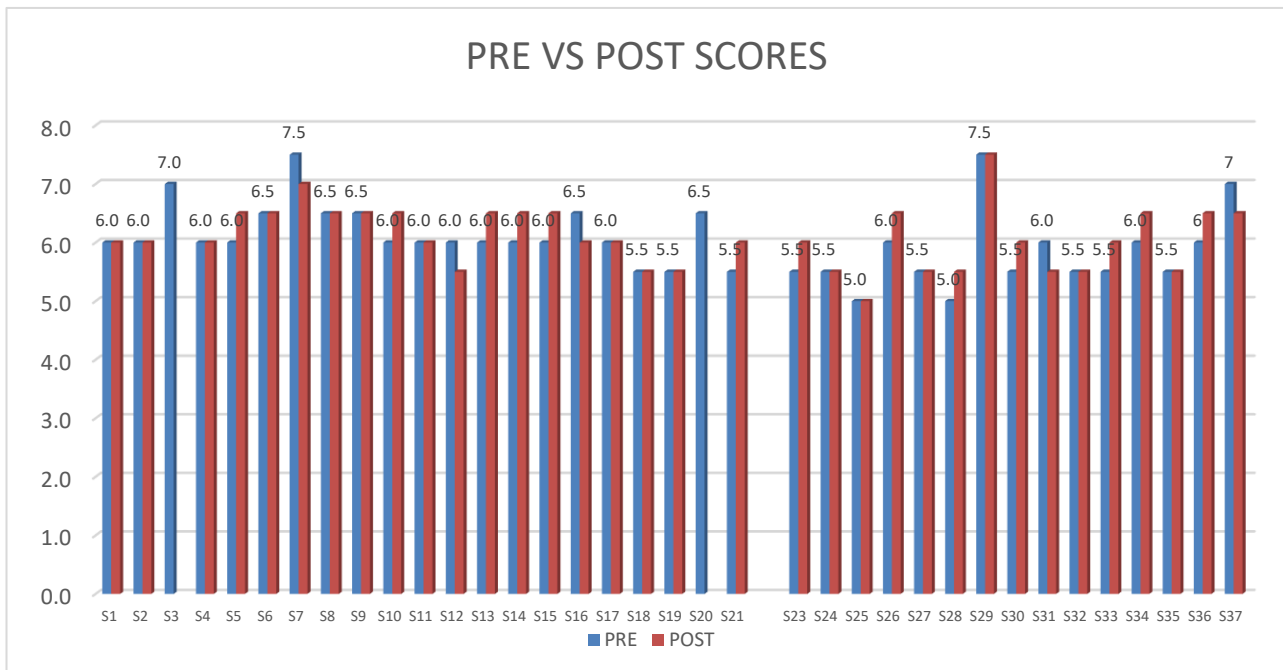


Figure 10. Difference between pre-test scores and post-test scores by each participant

For the pre-test, participants S29 and S7 obtained a 7.5 score, S3 and S37 a 7.0, five obtained a 6.5 average, fifteen obtained a 6.0, ten obtained a 5.5 and only two obtained a 5.0. On the higher scores, of the two participants who obtained a 7.5, one of them reduced the score in 0.5 points while the other remained unchanged. From the two participants with a 7.0, one reduced 0.5 points and the other one did not submit the post test. Out of the five students with a 6.5 score, one did not submit the post test, one more reduced 0.5 points and three remained unchanged. Fifteen of them scored 6.0 in the pre test, and eight of those fifteen improved 0.5 points, two of them decreased 0.5 points and five remained unchanged. No participant from the ones who obtained a 5.5 score initially reduced scores, and four of them improved in 0.5 points. Finally, only two scored 5.0 in the pre-test and one improved 0.5 points whereas the other one kept the same score. It is noteworthy that participants who scored either 5.5 or 5.0 in the pre-test did not show a decrease in their score and there seems to be a tendency for lower and mid scores to show an improvement (see Appendix U).

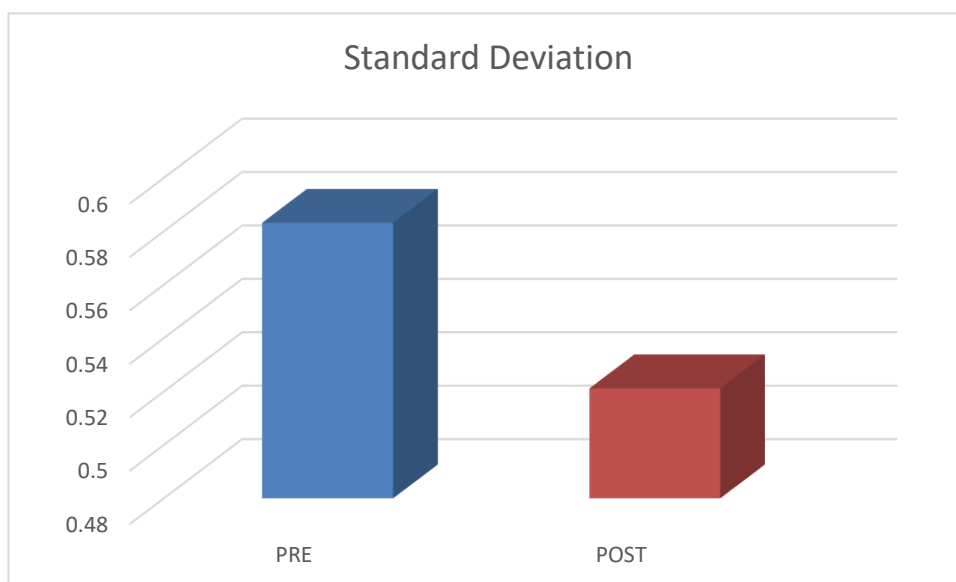


Figure 11. Standard Deviation between pre and post test scores

Additionally, standard deviation for both pre and posts tests were calculated and there was a reduction in deviation in the post test as observed in figure 20, meaning that scores tended to cluster more around the average, this matches the above data indicating that most changes occurred by only 0.5 points and that since there were more participants with either lower or mid scores, those were the ones who made the most gains.

A piece of data that seems to draw attention is that, although literature states that there is a gain in pronunciation from voice-based discussion forums (see 2.4.5), in this particular case, data does not show it; instead, it shows no variation in terms of the whole group (see Figure 10. Difference between pre-test scores and post-test scores by each participant). This could be explained in part

because two of the three candidates who did not submit, and thus were not considered for this graph, had high pronunciation scores. In addition, the rounding up of scores and the test conditions mentioned above might also contribute to the fact that there is no perceivable change in the pre and post-tests in the spoken performance aspect of pronunciation for the whole group.

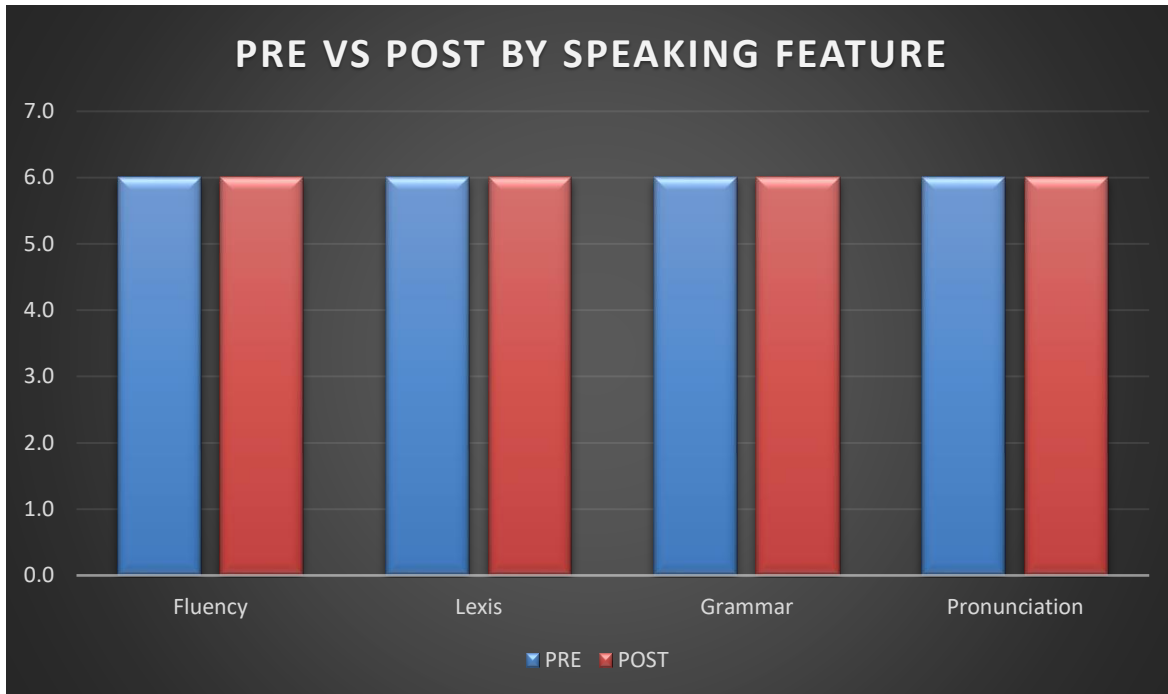


Figure 12. Pre and post test scores by indicator of spoken production with rounded scores

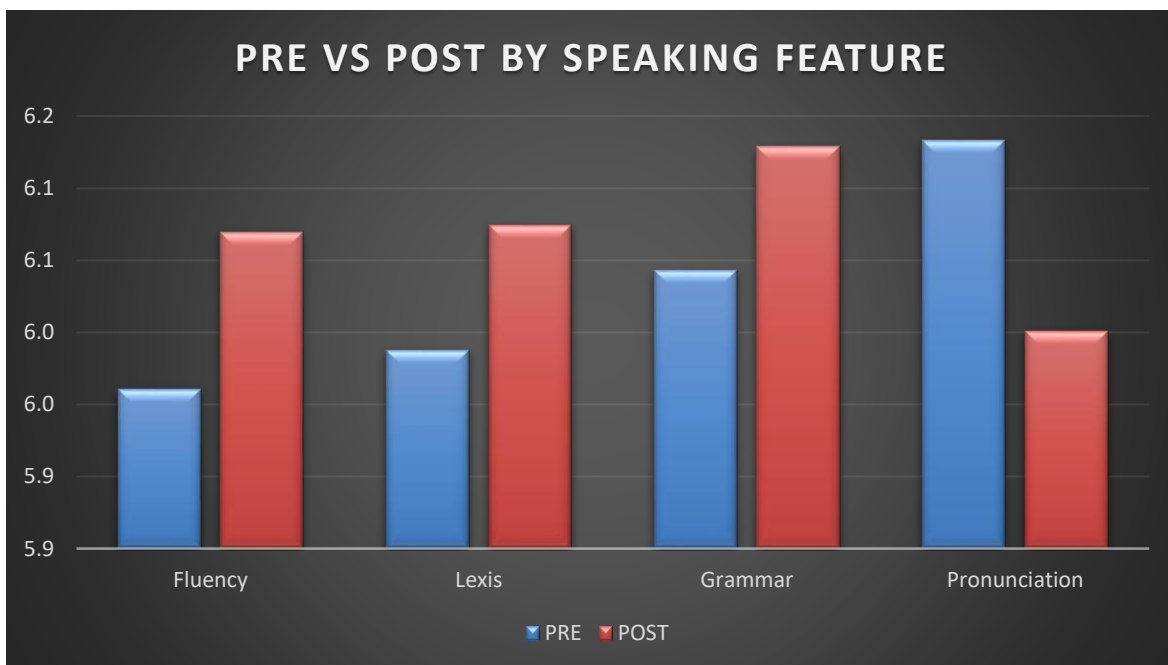


Figure 13. Pre and post test scores by indicator of spoken production without rounding scores

In general, pre and post test data appear to show no differences in their average scores or their variations are not significant as shown in figures 13 and 14. Nevertheless, hidden behind the

graphs, there is a more complex story where some participants make small gains at speaking feature level which can be observed in the graph while some others, who have higher scores in the pre test, do not show improvement or show a reduction in their grades (see Appendix U). Aspects that emerged when the participants were asked about these changes will be discussed in more detail in section 5.1 and in Chapter 5.

Pre and post test results can be interpreted as changes at an individual level rather than at group level; for instance, on the post-test, those who did not have additional assignments from other subjects were able to focus more on this test while those with more homework or pending assignments tried to finish the test fast, thus, not taking the time to prepare their contributions.

The type of test used for assessing speaking might have had an impact on the results since it was a proficiency test, and these test results might be influenced by other factors such as learner confidence, experience with the type of tests, testing conditions, rubric criteria used for assessing among others. A mastery test, designed, for example, specifically to use the grammar points explored in the course, applied in similar conditions, could have impacted the confidence of the learners, and shown different results at the overall spoken production.

A dependent samples t-test (or paired samples) was conducted to compare the effect of voice based AoD forums on the spoken performance test scores before and after this intervention on tests administered to EFL pre-service teachers. The results showed that there was no statistically significant difference in test scores from pre-intervention ($M=5.99$, $SD=.567$) to post-intervention ($M=6.07$, $SD=.510$), $t(33)=-1.606$, $p=.059$. The .059 p-value indicates that there is a 5.9% chance the increase in test scores from pre to post-intervention occurred due to chance alone. Although test scores increased from pre to post-intervention, the increase was not statistically significant at the $p<.05$ level.

Based on these results, the increase in test scores is likely due to chance rather than an effect of the intervention. The data do not provide sufficient evidence to conclude that the intervention had an impact on improving test scores. The trend towards significance suggests that a larger sample size may have resulted in a statistically significant difference. Overall, the intervention did not have a statistically significant effect on improving test performance based on this sample.

Paired Samples Test										
		Mean	Std. Deviation	Paired Differences		t	df	Significance		
				Std. Error Mean	Lower			Upper	One-Sided p	Two-Sided p
Pair 1	PRE - POST	-.0742034314	.26939400694	.04620069104	-.1681994440	.01979258129	-1.606	33	.059	.118

Obtained using SPSS version V29.0.01

4.2 Participants' Group Perception of the Asynchronous Online Discussion (AoD) Experience

This section presents the impact that voice Asynchronous Online Discussion (AoD) forums had on the participants as a group. It dwells on the learner experience through the design, subsequent personal experience in answering such discussion forums through participant strategies and perception of the intervention and ends with the impact on or of learner affective factors of the complete experience.

The data analysis (refer to section 3.10) is presented in two main areas, the participant perception of the forum experience, and the impact of and on participant personal factors. In general, the majority of the participants showed a positive attitude towards forums; however, there were some comments about the negative aspects they experienced. To begin, the aspects of participants' perception of co-designing each of the four discussion forum tasks, performing them as learners and subsequent providing of feedback will be discussed.

4.2.1 Forum Task Design

There seems to be a positive feeling regarding the collaborative nature of designing a discussion forum that would later be answered by same participants, in fact 28 (78%) of them, out of the 36, had a positive comment of the design of the forums. During the design, participants were presented with different aspects to be considered when developing tasks for the forums, aspects such as the LMS to be used, interaction patterns, number of contributions, length of their posts, dates for submitting, topics to be developed, and objective of the forum, which in this case was spoken production, and specifically development of accuracy since it is a grammar-based course.

4.2.1.1 Teacher Presence

During the design of AoDs forums, an important model considered was the Community of Inquiry (CoI), refer to 2.4.6 for a more detailed explanation. One of the ideas this model presents is "Teacher Presence" where, in its aspect of assessment, the task designer makes it evident for participants that (s)he is assessing their work, which appeared to have a significant impact. Forum activity during this research is consistent with that view since six participants report Teacher Presence as an important part of their positive experience with forums. Forum contributions make it a cumbersome work to check everything for instructors, so liking their posts when they contributed, before having the time to grade them, appears to have assisted in creating a positive experience for the users. For instance, when asked about it, S36 mentions that

“a mí me parecía bien que por ejemplo cuando usted nos- comentábamos algo subíamos nos da me gusta porque yo sabía que usted estaba- o sea que se había dado cuenta de qué había hecho mi trabajo me imagino yo qué pues lo escuchaba lo veía también entonces para mí eso también me hacía sentir bien” [original version]

“I thought it was good that, for example, when you- when we posted something, or uploaded something you clicked the like button, because I knew that you were - that is, that you had realized that I had done my work, I imagine that you listened to it, you saw it, so for me that also made me feel good.” [English version]

[Final Interview, S36]

This participant further contends that the tasks entailed work and effort, and the fact that there was a way of showing that their posts were being considered or checked contributed to a positive experience when performing the forums, this can be implied from her following comment:

“yo soy muy exigente se podría decir, y recuerdo que grababa cómo 1000 veces hasta que me gustaba cómo me quedaba entonces para mí sí era importante que el maestro- saber que el maestro lo escucho pues porque para mí sí representa un esfuerzo” [original version]

“I am very demanding, you could say, and I remember that I would record about 1000 times until I liked the way it sounded, so for me it was important that the teacher - to know that the teacher listened to it - because for me it represents an effort” [English version]

[Final Interview, S36]

In addition, another participant, S14, supports the idea of a “Teacher Presence” in the sense that there needs to be a teacher design, or a collaborative design if possible, and the tasks need to be part of the course assessment with a mark associated to them and that the participants need to be aware that the facilitator is reviewing their work. When asked what they think would have happened if the forums had not been a part of the course grading criteria, this participant replied:

“no hubiéramos tomado en serio o sea no no hubiéramos tomado la responsabilidad de que si usted hubiera estado aparte de oigan aquí esta el foro les va a ayudar y ahí pues usan ustedes si quieren me da vergüenza decirlo pero es la verdad creo que a veces no nos hacemos responsables de nuestro propio aprendizaje y aunque ya estamos grandes siento que siempre se necesita esa figura figura de guía que si ahí contigo llevándote de la mano sí o sea como que ... impulsándote hacer cosas que normalmente tú no harías siempre” [original version]

“we wouldn't have taken it seriously, that is, we wouldn't have taken the responsibility that, if you had been there, besides from “hey, here's the forum, it's going to help you” and then you use it if you want, I'm ashamed to say it, but it's the truth, I think that sometimes we don't take responsibility for our own learning and although we are grown-ups I feel that you always need

that guide figure who is there with you, holding your hand, that is, pushing you to do things that normally you would not always do” [English version]

[Final Interview, S14]

Furthermore, this visibility of the instructor in the forums, without overtaking the conversations, appears to be important for users. Participants want to make sure that the teacher is overlooking everything but not interfering with their conversation as expressed by S14 in the following statement:

“me encantó que siempre le daba me gusta los comentarios porque habla muy bien del maestro, porque dice que, okay, siempre está ahí, y está viendo lo que estoy haciendo. Entonces yo siento que, más que sentirme controlado, me siento ... apoyada como decir si lo hago mal el maestro me va a hablar [R: o ahí está] para darme retroalimentación y decir ah S14 hazlo así y así así está bien”

[Original version]

“I loved that you always clicked the like button on the comments because it speaks very well of the teacher, because it says that, okay, he's always there, and he's seeing what I'm doing. So, I feel that, more than feeling controlled, I feel ... supported like say if I do it wrong the teacher is going to talk to me [R: or there he is] to give me feedback and say, ah, S14 do it this way and that way it's okay” [English version]

[Final Interview, S14]

Participant S4 also adds to the idea of teacher presence through a like button or any type of reaction that the platform being used by a facilitator might have by stating that

“creo que está bien cómo puedes hacerle saber que pues ya viste que hizo todo bien y así porque pues tal vez y el alumno fue como que una tarea difícil para el hacer el audio y tal vez como que hacer una retroalimentación de eso sería contraproducente o participar junto con los alumnos haría como que la interacción alumno alumno menos predominante” [Original version]

“I think it's good how you can let them know that you saw that they did everything right and so on because maybe it was a difficult task for the student to do the audio and maybe giving feedback would be counterproductive or participating together with the students would make the student-student interaction less predominant” [English version]

[Final Interview, S4]

One more participant, S24, adds to the relevance of Teacher Presence by letting the participants know their work is being assessed through showing or writing reactions to their contributions without necessarily interacting in the actual conversation. This is evidenced by saying that

“yo tiendo mucho a pensar que hay muchos maestros porque si hay que con el hecho de ver que esta algo subido ah ya tiene los puntos pero ni siquiera se tomaron el tiempo de escucharlo o de algo así entonces ya ese like o que a veces si me ponía jajaja o algo así fue como que ah si lo escucho o sea si me esta tomando en cuenta si debo esforzarme para hacerlo bien porque los esta escuchando”

[Original version]

"I tend to think that there are a lot of teachers, because there are, that just by seeing that it is uploaded, they already have the points, but they didn't even take the time to listen to it or something like that. Then, that “like” or that sometimes you would write “hahaha” or something like that, was like, ah, yes, he did listen to it, that is, he IS taking me into account, then I should make an effort to do it well because he is listening to them" [English version]

[Final Interview, S24]

The argument of using a button to show participants their work is being assessed, but without overtaking the conversation to encourage student-student participation, is presented as a similar strategy an instructor would use in a classroom where a learner is allowed to continue speaking regardless of grammatical or lexical mistakes in order to favour the development of fluency, but in this case it is in a slowed down, or asynchronous, version of a conversation. Feedback to the learners would come after their contributions to the forum were over. From this section we can infer that this type of teacher presence is beneficial for learner participation and motivation.

4.2.1.2 Collaborative Design

The collaborative aspect of designing the forums together with the participants so that they could later use them was well received; they felt they were being considered and most had positive comments on this regard. For example, when participant S36 was asked about this collaborative aspect, she answered:

“pude ver qué maneras desarrollar los foros en los que los alumnos puedan tomar el control por así decirlo [R: contribuir] ajá contribuir y que eso lo hace mejor- más efectivo para el estudiante a mí lo personal me gusto mucho y creo que ahora después de esto creo que sí me gustaría mucho utilizar mis clases porque ya no los veo como antes ahora me parecen atractivos” [Original version]

“I could see ways to develop forums in which students can take control, so to speak. [R: to contribute] yes, contribute and that makes it better - more effective for the student, I personally liked it a lot and I think that now after this I would really like to use my classes because I don't see them as I did before, now they seem attractive to me” [English version]

[Final Interview, S36]

According to some participants, one aspect of working collaboratively in the design is that, after the design, they get to experience it, feel what their own designs provoke on learners, and they were able to reflect on this aspect. When interviewed about the matter, S14 provides two comments that support this idea, she stated:

“I liked the topics and the dynamic that the teacher used with the elaboration of the fora. We could choose the topic of the fora and create it ourselves. That made the tasks more personalized and attractive”

[Final Reflection, S14]

“con experiencia vivencial no que yo ya pasé por ese proceso ya lo viví vi que sí funciona vi que sí puede ser divertido si así lo queremos los maestros” [Original version]

“Having experienced it myself right? That I have already gone through this process, I have already lived it, I saw that it works, I saw that it can be fun if we teachers want it to be” [English version]

[Final Interview, S14]

When asked what he had learned from the forum project, S11 indicated that learning about the design of forums is what he learned the most, he mentions that:

“yo creo que aprendí más en sí a darle oportunidad a los alumnos cómo querían que fuesen los foros igual las reglas que tenían que tener las limitaciones yo creo que sería más como el diseño de un foro para los alumnos hecho por los alumnos” [Original version]

“I think I learned more about giving the students the opportunity to decide how they wanted the forums to be like, the rules they had to have, the limitations, I think it would be more like the design of a forum for the students made by the students.” [English version]

[Final Interview, S11]

S34 also mentions that if participants are involved in the design process, the tasks became more engaging since they were topics in which they were interested. By the end of the project, when evaluating the last forum, twenty-six participants (72%) reported liking the topics being used. She explains that:

“el principio sí era cómo se sentía más como algo pues una tarea o así pero conforme los fuimos diseñando y dando ideas diciendo pues los temas y todo eso siento que se sintió también más ligero sino que eran cosas que qué pues nosotros habíamos sugerido que la mayoría estaba más interesado en esos temas entonces sí siento que hubo diferencia del principio al final” [Original Version]

“at the beginning it felt more like a task or something like that, but as we were designing them and giving ideas and saying the topics and all that, I feel that it also felt lighter but they were

things that we had suggested and most of us were more interested in those topics” [English Version]

[Final Interview, S34]

This aspect allowed the pre-service teachers to reflect on what they would want to use the discussion forums in the future, or if they would want to use them at all. They were able to explore what aspects were of interest for them as future teachers and which ones they could work collaboratively with their future students, who will not necessarily be future teachers but rather ESL learners. Learners may conclude that choosing topics for discussion forums together with their future learners might be beneficial for a discussion forum experience as it happened in this research, leaving aside the pedagogical aspect of designing tasks to be carried out by them.

4.2.1.3 Task Complexity

One of the aspects considered by several participants as an important part of having a positive experience with discussion forums was that tasks were designed to be easy. Eleven participants commented on favour of simplifying tasks for the forums, and one aspect of doing it was to include topics which were familiar to them. For instance, S25 argued that

“la información que teníamos quedar en los foros eran cosas nuestras pues casi siempre se trataban de gustos por lo tanto era más fácil como quien dice desarrollarlo no pues yaaa tenía una idea de lo que puedo decir y no más le agregaba los puntos gramaticales que teníamos que meter y pues salía solo” [Original Version]

“the information that we had to give in the forums, it was almost always about our likes, so it was easier to develop, I already had an idea of what I could say and I just added the grammatical points that we had to put in and it came out by itself” [English Version]

[Final Interview, S25]

The argument is that if the task is easy, it will be easier for them to integrate the grammar points, or any linguistic feature requested as they will already have the idea of what they want to say, they just need to reorganize information to meet the task requirements. Thus, the forums represented a space for learners to put what they have learned into practice. S1 and S15 also add support to this point when mentioning that

“bueno sí me facilitaba pero al momento de por eso lo escribía porque al momento de tener que usar las estructuras gramaticales tenía que ver a ver cómo las voy a incluir en lo que quiero decir porque yo ya tengo mi idea” [Original Version]

“well yes it made it easier for me but at the moment of, that is why I was writing it because when I had to use the grammatical structures, I had to see how I was going to include them in what I want to say because I already have my idea” [English Version]

[Final Interview, S1]

“I liked the simplicity of the task, so I wouldn’t change it.”

[Forum 1 Evaluation Sheet, S15]

Learners who are engaged in a cognitively present task (see 2.4.6.1 for definition of cognitive presence) such as analysing or planning an idea they want to showcase, are more likely to be able to identify and correct their own errors given the extra time for pre-task planning (Ellis, 2005) they have in an asynchronous conversation as they are able to analyse their own work before sharing with others. Learners are also likely to learn from others mistakes or corrections as they can listen to others’ contributions before participating themselves because they are actively thinking about the language and how it is being used. Skehan & Foster, (1999) posit that the task structure and the task need to be simple and provide the opportunity for pre-task planning in order to develop accuracy.

Negotiation of meaning can also be impacted by task complexity as the additional time cognitively present learners have to analyse and prepare their contributions can be used to think critically and reflectively about the topic, having enough time to explore the different ideas presented by their peers before contributing. This can lead to deeper understanding of the topics, considering different points of view, and finding more concise, respectful, or clear way to express their ideas.

The Cognition Hypothesis states that the apparent trade-off between focusing on meaning or form presented by the Limited Capacity Hypothesis can be overcome, arguing that complex tasks promote more complex and accurate language where simpler tasks promote fluency (see 2.3.2). However, in terms of preference, data from this study suggests that they prefer simpler tasks which in theory should develop fluency, data from this study shows a limited increase in fluency (see 4.1).

4.2.1.4 Brief and Detailed Instructions

Another recurring comment was that it was important for instructions to be brief but detailed, they preferred them to be bulleted as if there was too much text, the tendency was to not want to do the tasks or to feel overwhelmed by so much information. Most of the comments made in favour of brief but detailed instructions appeared during the feedback sessions on each of the discussion forums, some of the comments made during these sessions were:

“I didn’t dislike anything, all was easy to understand and do”

[Final Reflection, S3]

“I would not change the detailed instructions, they are very clear and I knew exactly what I had to do”

[Forum 4 Evaluation Sheet, S7]

In addition, when the instructions were not brief and detailed, in those same sessions, comments supported the idea; for instance, they mentioned that when writing instructions, designers should include the number of times the grammatical point is to be used and the length of the audios. This is clearly evidenced in S7 when she mentioned that

“that the instructions were not that detailed, since it didn’t say the number of passive sentences we had to use or how long the audios had to be”

[Forum 2 Evaluation Sheet, S7]

“I also liked that we had a limit of responses and a limit of time”

[Forum 5 Evaluation Sheet, S2]

An aspect of instructions that also seemed to have an impact on participants was consistency in the way instructions were presented. Having brief, clear, and consistent instructions throughout the project appears to have helped participants feel more confident in what they had to do. For instance, when asked about it, S27 claimed that

“I liked that the instructions were the same as in every other task, because this way I already knew what I had to do and it make the task easier and faster to be done”

[Forum 5 Evaluation Sheet, S27]

The above strengthens the idea that instructions must be brief, detailed, and consistent. From the progression of the first forum (designed by researcher) to the fifth and last one (all the other forums designed collaboratively), once all the feedback had been integrated, the majority of participants considered instructions to be better as they made the tasks easier.

4.2.1.5 Forum Due Dates

A topic that generated controversy when designing the forums was how to set deadlines to submit participations; here, some advocated for having only one single deadline while others preferred having two deadlines. The idea for having two due dates was that participants would post their contributions on the first deadline, and the interaction with their peers would occur in

the second date. However, on the last evaluation sheet, eight participants explicitly mentioned they preferred having one single due date as having two was confusing for them since they were used to having only one single due date from their previous experiences. Several comments reaffirm this idea as can be read below:

“una vez si subí tarde todo porque yo pensé que era una fecha no más porque si estaba acostumbrada en los otros foros entonces las dos fechas a mí me confundieron mucho y prefiero que sea una al final” [Original version]

“once I did upload everything late because I thought it was only one deadline because I was used to it in the other forums so the two dates confused me a lot and I prefer it to be one at the end”

[English version]

[Final Interview, S8]

“I would also change dividing the dates because for me it was harder to remember two dates, and to upload two times, I would rather have one date, I think it makes the task less overwhelming”

[Forum 3 Evaluation Sheet, S7]

After all the cycles, some were advocating for using only one date for posting on the forums. For instance, in the last forum iteration, S7 and S18 mentioned that

“also liked that there was only one date instead of two”

[Forum 5 Evaluation Sheet, S7]

“As well, I like the assignment only had one due-date”

[Forum 5 Evaluation Sheet, S18]

In contrast, others, although fewer participants, advocated for having two dates for posting their contributions. For instance, S37 and S13 stated that

“porque a veces era muy teniente o molesto tener que estar buscando a alguien que ya comentara oh yo no podía terminar mi actividad porque otra persona aún no ponía algo y habían personas que comentaban el último día” [Original version]

“because sometimes it was very tiring or annoying to have to be looking for someone who already commented or I could not finish my activity because someone else had not yet posted something and there were people who commented on the last day” [English version]

[Final Interview, S37]

“Specify a deadline for students to upload their audio and another one for the interactions instead of doing them all at the same time because some people waited a lot of time to upload something and I had to wait to finish the assignment even though I started early”

[Forum 5 Evaluation Sheet, S13]

Some complained that when there was only one date, others waited until the last minute to submit their homework, and since interaction was required, they could not finish their assignments until someone else had commented. Therefore, they preferred having two dates instead of one. When asked about it S10 commented how she had felt and S15 what she had liked:

“The audios made me feel anxious because I felt like I was not going to have time to reply to my classmates since they uploaded their audios until the last minute”

[Final Reflection, S10]

“The time frames idea (The main video first at an accorded date then the responses)”

[Forum 3 Evaluation Sheet, S15]

4.2.1.6 Required Interaction in Forums

Indicating the amount of interactions participants should have after their main contribution and the idea of not interacting with someone who had already received a reply was well received by the participants. Some considered that these instructions helped so that all participants would interact with someone and not only a few receiving all the replies or posts. Evidence of this can be observed in the following comments:

“it was good to have interaction between the students”

[Forum 5 Evaluation Sheet, S06]

“I would not change the limit of responses because that makes everyone to receive a comment and to have interaction”

[Forum 5 Evaluation Sheet, S08]

“would not change that there is a minimum of comments peer students, because in that way all students will have a comment on their post”

[Forum 5 Evaluation Sheet, S34]

“would not change the fact that it was trough audios, and that we had to reply to two of our classmates”

[Forum 5 Evaluation Sheet, S36]

4.2.1.7 Length of Audio Posts

When presenting the instructions, several participants advocated for there to be a clear instruction of the length of the audio in the beginning of the project. By the end, some mentioned that having a range of length that their audios could last was a better option. When asked about the length of the audios, participants answered the following:

“I would change the time and give a 40-60 second range”

[Forum 5 Evaluation Sheet, S07]

“I would not change the duration of the audios”

[Forum 5 Evaluation Sheet, S04]

“I also think that the time of each audio was very appropriate”

[Forum 5 Evaluation Sheet, S36]

The change in time of preferences for the length of the audios might entail that as learners experience the forums themselves and understand the difficulties they pose, they are able to provide solutions that could reduce such problems. This could suggest that as learners become more familiar with these types of forums, they might need less prescriptive instructions, due to their familiarity with them and with the expectations from the forums. Generating a template to include the essential elements to take into account when designing the tasks could prove beneficial for both learners and instructors.

Running these types of AoD for longer stretches of time could allow instructors to explore many aspects of teaching and learning. Forums could be used to build stronger relationships with each other, and with the instructor, by getting to know themselves better which could foster more collaboration and support amongst the group. It would allow to devise ways for students to track and analyse themselves and their progress, they could keep track of the feedback received and analyse the changes in this one through time, which could be effective for increasing motivation. Finally, it can provide a good tool to engage in meaningful and authentic communication as it is real information what they can share leading to improving language skills to communicate more effectively and thus, slowly develop fluency, complexity, and accuracy.

4.2.2 Strategies for Forums

Participants tended to have different strategies depending on their perceived personality or English skill level when answering the forums. They mentioned strategies such as writing what they were going to say before recording it (20 participants), rehearsing what they were going to record, correcting and rerecording if they felt something was not as they wanted it to be as well as searching information on the Internet to better complete the tasks.

Strategies used by learners were discussed in the final reflection and in the final interview, being the latter where they were mentioned the most. Learners were able to share their strategies but they depended more on the individual than on general strategies so no strategy seemed to be more effective than the other but rather more common as they used the strategy if they thought it was useful, otherwise they did not. Teaching different strategies they could apply to carry out their speaking tasks before starting the forums could prove interesting in terms of exploring the effectiveness of specific strategies.

4.2.2.1 Time for Preparing Contributions

Participants used the asynchronous nature of the forums, and the additional time this provided to prepare their contributions before posting them. Twenty participants mentioned that there was an improvement in the amount of time spent preparing their contributions, they spent more time on the first forums and less on the last ones. Evidence of this can be found in comments such as the following:

“Another think I observed that at first I used to write what I was going to say and by the last forums I just recorded myself and starting talking. I think it is because all the practice I am able to arrange my ideas as I am speaking”

[Final Reflection, S13]

“at the beginning of the semester I had to first make notes and then read what I was going to say, but as time went by I was able to order my ideas in a better way and I did not feel the need to write before recording my audios”

[Final Reflection, S17]

“también hacía notas al principio porque tenía- no podía expresar una idea sin tenerla escrita o sin tener algo ahí que me respaldara yo no podía fluir así (.) entonces comencé escribiendo pero después escuché no sé por dónde que no no tienes no tienes que escribirlo tienes que así fluir nomas entonces dije okay lo voy a intentar y lo he intentado y al principio sí me trababa y lo borraba y lo volví a intentar y no me gustaba y así (.) pero ya este último que envíe no tuve que escribir nada (.) sí lo pensé poquito pero fue así como que órale ya (.) ya estoy lista” [Original Version]

“I was also making notes at the beginning because I had - I couldn't express an idea without having it written down or without having something there to back me up I couldn't flow like that (.) so I started writing, but then I heard, I don't know where, that you don't have to write it down, you just have to flow so I said, okay I am going to try it, and I have tried, and at the beginning I got stuck and I erased it and I tried again and I didn't like it and so on (.) but this last one I sent I didn't have to write anything (.) I thought about it a little bit but it was like ok let's do this (.) now I am ready”

[English Version]

[Final interview, S14]

“se me hizo más fácil describirlo formar las ideas se me hizo más rápido... sí, al final” [Original Version]

“it became easier for me to describe it, to form the ideas it became quicker... yes, at the end”

[English Version]

[Final interview, S10]

“since at the beginning of the semester I had to first make notes and then read what I was going to say, but as time went by I was able to order my ideas in a better way and I did not feel the need to write before recording my audios” [Original Version]

[Final reflection, S17]

One more aspect that appeared to be beneficial due to the additional time they had to prepare was that participants were able to search for vocabulary words they needed in order to say with more accuracy what they wanted to convey which seemed to aid in the learning of vocabulary. When asked about the impact the forums had had, S25 replied that:

“también aparte aprendí vocabulario porque por ejemplo habían ocasiones en que no sé cómo se dice esta palabra voy a buscar por tal palabra y ya localizaba me aprendía cómo se pronunciaba y pues la agregue a mi diccionario cómo se podría decir” [Original Version]

“I also learned vocabulary because, for example, there were times when I didn't know how to say this word, I went to look up for such word and found it and learned how to pronounce it, so I added it to my dictionary” [English Version]

[Final Interview, S25]

4.2.2.2 Self-Correction

An additional strategy used by participants was self-correction. With the extra time they had, participants were able to listen to themselves and focus on aspects that they considered important, or, if they received or asked for feedback from either the teacher or classmates, on

features that others pointed out that need improvement which is consistent with literature in the sense that it also increases self-awareness in speech patterns Wilches (2014). When finished, if they considered their result as acceptable, they posted their contribution, if they did not, they corrected their work before submitting.

Self-correction seems to have an impact on motivation as participants report reaching a point where they felt their answers were of good quality, and after that, they contributed, this generates an important self-reflection on their performance and their capacity to improve. This self-correction process is evidenced in the comments of participants S2 and S29:

“The discussion forums were useful since I had the chance of recording myself several times and correcting my mistakes when speaking” [Original Version]

[Final Reflection, S2]

“I sometimes felt desperate when doing all these activities because I had to record myself many times until I had a good result” [Original Version]

[Final Reflection, S2]

“I tried not to read when recording and recorded more than once each time before uploading, making me aware of my mistakes” [Original Version]

[Final Reflection, S29]

Another aspect related to self-correction that was reported was that, in general, creating audio files is less frustrating than creating video content, for some creating video content represented a big challenge. When asked about this, participants stated that:

“I felt frustrated when I made a mistake and had to do it all over again, specially when I did the screencast. I felt less frustrated when I made a mistake in audio” [Original Version]

[Final Reflection, S29]

“me di cuenta que no sirvo para ser ni YouTuber ni streamer entonces porque no me gusta grabarme o mas bien o yo creo que no tengo el equipo para hacerlo y no o sea no me gusto la idea de grabarme...aja en video” ... “en audio se me hizo mas fácil porque ya había practicado y pues también ayuda mucho para practicar pronunciación” [Original Version]

“I realized that I am not good at being a YouTuber or streamer, so because I don't like to record myself or rather I think I don't have the equipment to do it and I don't like the idea of recording myself...aha in video” ... “in audio it was easier for me because I had already practiced and it also helps a lot to practice pronunciation” [English Version]

[Final Interview, S12]

“lo que no me gustó fue (.) el foro donde teníamos que grabarnos se me complicaba mucho a mí grabarme y luego verme porque me daba mucha incomodidad y sobre todo porque no estoy acostumbrada a eso entonces yo no lo quería hacer y fue un problema para mí tanto que yo no quería hacer ese foro pero pues al final de cuentas me animé porque pues vi que la mayoría de mis compañeros lo hicieron” [Original Version]

“what I did not like was (.) the forum where we had to record ourselves, it was very complicated for me to record myself and then watch myself because it made me very uncomfortable and above all because I am not used to that, so I did not want to do it and it was a problem for me so much that I did not want to do that forum, but in the end I was encouraged because I saw that most of my colleagues did it” [English Version]

[Final Interview, S28]

“cuando estaba haciendo el screen cast me frustraba más cuando me equivocaba con el screencast porque porque tenía que volver a poner el vídeo y empezar a grabar otra vez porque yo quería una parte específica que se viera del vídeo cuando yo estaba diciendo tal cosa y así no se podía entonces me daba por vencida” [Original Version]

“when I was doing the screen cast I got more frustrated when I made a mistake with the screencast because I had to replay the video and start recording again because I wanted a specific part of the video to be seen when I was saying such and such a thing and then I gave up” [English Version]

[Final Interview, S29]

Using more than one mode of interacting, this is using either text, audio, video or a combination of them, seemed to have a positive reception, this multimodality and the fact that they were given the option to choose the mode they wanted to use in order to reply or submit was well received by participants which is consistent with literature CEFR (2018) and (Hampel, 2003).

When asked about something that they did not expect to learn, S34 answered that

“De hecho creo que pues a la mayoría bueno les gusto o se les hizo más fácil pues por audios o de otras formas y pues eso también siento que aprendí o sea que no siempre es solo texto o contestarle al otro la misma forma si no que pues hay más formas de [R: de interactuar?] ajá de interactuar entre nosotros” [Original Version]

“In fact, I think that most of them liked it or found it easier to do it through audio or other ways, and I also feel that I learned that it is not always just text or answering the other in the same way, but that there are more ways to [R: to interact?] to interact among ourselves” [English Version]

[Final Interview, S34]

4.2.2.3 Rehearsal

Thirteen participants mentioned rehearsal as a strategy used when performing the tasks in the forums. They stated that by rehearsing, they were gradually improving their speed of thought or their capacity to generate ideas or sentences in their head and then say them, namely their fluency. When asked about it, participants shared that:

“como que acomodaba rápido y a mis ideas por ejemplo para el último speaking test todo lo tenía que pensar más rápido y ya, lo decía... [R: ¿y en los primeros foros se te hacía un poco más difícil?... sí me tomaba más tiempo como por ejemplo hacía notas o ordenaba más y ahora ya lo puedo hacer más mental” [Original Version]

“I had to think faster for the last speaking test, for example, I had to think faster and then I said it... [R: and in the first forums was it a little more difficult for you? ... yes, it used to take me more time, for example I used to make notes or order more, and now I can do it more mentally” [English Version]

[Final Interview, S16]

“sí, vi que mejoré, ya con las siguientes, la última práctica de speaking, siento que mejoré bastante. Me salieron los audios bastante más rápido” [Original Version]

“Yes, I saw that I improved, and with the next ones, the last speaking practice, I feel that I improved a lot. My audios came out much faster” [English Version]

[Final Interview, S4]

“sí, me acuerdo que batallé mucho para ser fluida en el primer audio, y bueno, realmente en los últimos no batallé tanto, siento que me salió un poquito más” [Original Version]

“yes, I remember that I struggled a lot to be fluent in the first audio, and well, in the last ones I didn't really struggle that much, I feel that I was a little bit more fluent” [English Version]

[Final Interview, S5]

For this strategy it is assumed that rehearsal is uttering the sentences they are going to use, as opposed to writing them or using bullet points to guide what they will say (but without uttering the sentences). It is very likely that the twenty learners (see 4.2.2.1) who spent time preparing their contributions, and the remaining sixteen as well, but it is mentioned specifically in the data. Rehearsal is very related to self-correction as well; thus, self-correction is very likely to have originated from rehearsal.

4.2.3 Positive Experience

The process of designing collaboratively with the researcher/teacher, voting for the best AoD forum option, subsequent performing of the tasks, evaluating the experience and repeating this iteration three times more generated both positive and negative experiences which are presented next. To begin, the positive aspects of this process will be discussed.

4.2.3.1 Perceived Linguistic Improvement

Twenty-eight (78%) participants explicitly stated that they had perceived some linguistic benefit due to the use of AoD forums, ranging from pronunciation, fluency, and grammar to aspects more related to their personal motivation such as self-awareness, self-confidence among others (see 5.2.1). When asked about the forums and the effects they had, participants shared different positive opinions as shown below:

“Me gustaron mucho las actividades que hicimos en los foros, y la verdad sí me ayudaron mucho a expresar mejor mis ideas, aunque algunas veces se me dificultaba” [Original Version]

“I really liked the activities we did in the forums, and the truth is that they did help me to express my ideas better, although sometimes it was difficult for me to do so” [English Version]

[Final Reflection, S32]

“I believe that the skill that I worked more is pronunciation and fluency. I definitely think that I improved”

[Final Reflection, S14]

“I also liked that I was able to improve in many aspects thanks to the forums”

[Final Reflection, S17]

“I think the forum helped me a lot to improve my speaking and to feel more comfortable speaking when filming or audio recording”

[Final Reflection, S18]

“Since the first forum we did using oral production, I quickly could notice how I used the grammatical structures in my speech and how they become more common in it”

[Final Reflection, S21]

“I also think that I improve a lot, because I was very shy and insecure at speaking in English, but now I think I am doing better on that area. I discovered that during my final assessment presentation”

[Final Reflection, S24]

“I feel like the use of forums was helpful, especially for organizing my ideas well, and controlling my diction”

[Final Reflection, S26]

“Now that I recall I am glad I did them because I can see how much they helped me and I feel more relaxed when I have to do a speaking activity”

[Final Reflection, S36]

“the forums and the presentations that began to change since I was put in a situation where I had to leave my comfort zone and I think that was good because I helped me improve in my tone, teachers voice and freedom to speak out loud. By the last forum I felt comfortable and prepared to participate”

[Final Reflection, S37]

“El área de producción oral también es una de las áreas que siento que mejoré. Todas las actividades que realizamos siento que me ayudaron mucho, sobre todo a estructurar las oraciones más apropiadamente, a integrar estructuras gramaticales aprendidas durante el curso, etc.” [Original Version]

“The area of oral production is also one of the areas that I feel I improved. All the activities that we did, I feel, helped me a lot, especially to structure sentences more appropriately, to integrate grammatical structures learned during the course, etc.” [English Version]

[Final Reflection, S23]

4.2.3.2 Sense of Community

Participants discuss a perceived benefit from interacting with other classmates who are not their friends, indicating that these social interactions with people they do not know may boost their self-esteem. When discussing this topic, they say that:

“el interactuar con alguien más que a lo mejor no es tu amigo que no es tan cercano a ti creo que es bueno para ti como que por medio de un foro se comuniquen creo que sí puede ayudar a la autoestima del alumno mucho por lo menos yo me sentía bien cuando interactuaba con alguien más que no era tan cerca de mí” [Original version]

“interacting with someone else who may not be your friend who is not as close to you, I think it is good for you, like communicating through a forum, I think it can help the student's self-esteem a lot, at least I felt good when I was interacting with someone else who was not as close to me”

[English version]

[Final Interview, S36]

Similar to S36, others perceived forums are helping them to integrate as a class. The tasks involving the sharing of likes, dislikes or preferences to their classmates created a sense of closeness. This can be appreciated by the comments of S12 and S24:

“entonces pues aprendí mucho de mis compañeros que si me hizo sentir como un poquito más cerca de ellos” [Original version]

“so I learned a lot from my classmates that made me feel a little bit closer to them” [English version]

[Final Interview, S12]

“yo creo que había muchos que buscábamos mucho gente que no tuviera comentarios porque cuando me toco a mi por ejemplo hay ciertas compañeras con las que no platico mucho que estamos de punta a punta en el salón o cosas así pero yo veía que no tenían- que algunos tenían tres comentarios y ellas no tenían ninguno y yo decía que- pues los voy a escuchar y les voy a contestar a ellas o algo así porque si o sea pobrecitas decía ay se tomaron el tiempo y todo eso que triste que no les contesten yo me sentiría mal” [Original version]

“I think there were many of us who were looking for people who had no comments because when it was my turn, for example, there are certain classmates with whom I don't talk much, we are all over the room or things like that, but I saw that they didn't have - some had three comments and they didn't have any and I said - well, I'm going to listen to them and answer them or something like that because I mean, poor girls, I said oh, they took the time and all that, it's sad that they didn't reply to them, I would feel bad” [English version]

[Final Interview, S24]

4.2.3.3 Perception as Future Teachers

Twenty-four participants explicitly stated that they would use discussion forums when they become teachers, the remaining twelve participants did not state whether they would use them or not. Working collaboratively in designing forums sheds light on a reflective process and change of perspective on some participants as to whether they would use AoD forums in their practicum, refer to section 4.2.3.3. Most of the reflection on this particular topic occurred in the final

interview, when they were asked what they thought about the project and what they had learned. Some of the comments that support this idea are:

“yo creo que mejoro mucho mí- el concepto que yo tenía de los foros y antes tal vez si yo nunca hubiera pensado en utilizar los yo como maestra ahora yo creo que sí los utilizaría” [Original Version]

“I think it has greatly improved my - the concept that I had of the forums and before maybe if I had never thought of using them as a teacher, now I think I would use them” [English Version]

[Final Interview, S14]

“me llevo una buena idea de los foros que no tenía antes porque yo tenía la idea de que eran aburridos o no tan importantes para (.) la práctica para mejorar (.) entonces si cambio mi forma de ver los porque usualmente los foros que nosotros habíamos hecho en otras clases eran solo texto y el maestro era el que elegía el tema y lo teníamos que hacer (.) entonces pude ver qué maneras desarrollar los foros en los que los alumnos puedan tomar el control por así decirlo [R: contribuir] ajá contribuir y que eso lo hace mejor- más efectivo para el estudiante, a mí lo personal me gustó mucho y creo que ahora, después de esto, creo que sí me gustaría mucho utilizar mis clases porque ya no los veo como antes ahora me parecen atractivos” [Original Version]

“I take with me a good idea of the forums that I did not have before because I had the idea that they were boring or not so important for (.) the practice to improve (.) so it did change my way of seeing them because usually the forums we had done in other classes were just text and the teacher was the one who chose the topic and we had to do it (.) then I could see what ways of developing forums in which students can take control so to speak [R: contribute] aha contribute and that makes it better - more effective for the student, I personally liked it a lot and I think that now, after this, I think I would really like to use my classes because I no longer see them as before now they seem attractive to me” [English Version]

[Final Interview, S36]

“me quedo con herramienta en sí (.) estoy segura que si la voy a usar en el futuro (.) ya sea para incluirlo en clases que sean presenciales o las que sean tareas o si son en línea sí me parece muy buena herramienta” [Original Version]

“I am sure that if I am going to use it in the future (.) either to include it in face-to-face classes or in homework classes or if they are online, I think it is a very good tool” [English Version]

[Final Interview, S16]

4.2.4 Negative Experience

As the project unfolded, there were several aspects that had a negative impact on the participants perception of the experience. Some of them were their previous experience, anxiety levels,

technical issued that appeared while trying to complete the tasks and their personal environments where they had to record their audios which will be described below.

4.2.4.1 Previous Experience with Forums

There were nine participants who explicitly stated not liking discussion forums, although they referred to text-based forums in which they had participated before, but at the end of the project, their opinions were different. For example, S26 argues that:

“creo que me llevo una perspectiva diferente de los foros porque pues sí como que pensándolo mejor la opinión que tenía sobre ellos eran más de los que había hecho pues antes obviamente que eran la verdad pues muy aburridos” [Original Version]

“I think that I have a different perspective of the forums because, thinking about it, the opinion I had about them was more about the ones I had done before, obviously that they were actually very boring” [English Version]

[Final Interview, S26]

Previous experience with forums shaped the perception that participants had of the forums, they had the idea that they just needed to either write their opinion on a given topic or to disagree with another participant’s comment and explain why. The idea of simply opening a forum and answering it seems to be what made the forums unappealing, this is evidenced in comments such as:

“por lo general en un foro así todo mundo pone cualquier cosa para llenarlo [R: para la calificación] aja entonces yo dije pues si va a estar medio tedioso” [Original Version]

“usually, in a forum like this everybody puts anything to fill it out [R: for the grade] aha, so I said well yes, it is going to be kind of tedious” [English Version]

[Final Interview, S24]

“pues es como dice Jazmin pues si el maestro quiere que el maestro ponga una foto de mi familia y escriba algo pues lo voy a escribir y ya”

“It's like Jazmin says, if the teacher wants me to put a picture of my family and write something, I'll write it and that's it” [English Version]

[Final Reflection, S29]

4.2.4.2 Anxiety

Twenty-seven participants reported to have felt anxiety in a given moment of the project. Some reasons reported for feeling anxiety are trying to make the audios sound perfect, their audios

being heard by all the class, showing themselves through video, planning, and fluency issues. Examples of these are supported by the following comments:

“it was always stressful to finish them (after forum 1). This was because I am a perfectionist, and I wanted the audios to sound perfect, and so at the beginning they took me a lot to record them because I listened to them and had to record them again if I did not like them”

[Final Reflection, S26]

“Referente a como me sentí, al principio me sentía nerviosa cuando tenía que presentar en clase o grabar las actividades del foro, siento que al final ya me relajé y por lo tanto las actividades salían mejor, ya que fluían de forma más natural” [Original Version]

“Regarding how I felt, at the beginning I felt nervous when I had to present in class or record the forum activities, I feel that in the end I relaxed and therefore the activities came out better, since they flowed more naturally” [English Version]

[Final Reflection, S23]

“Anxious because I hate planning what I have to say and I felt that I had to plan it because I speak too fast and I couldn’t reach the time asked”

[Final Reflection, S9]

“The video was the most stressful thing, I did not even do the full activity because I did not want others to see videos of myself”

[Final Reflection, S31]

“At first I was anxious because all my classmates were going to listen to my audio and I wanted to have a good fluency so I took a lot of time in the recording time” ... “The last forums I felt more relaxed and I did not struggle that much to have the length the audio was suppose to be”

[Final Reflection, S13]

This last comment supports the idea that constant practice can lead to improvement in their skills and, therefore, a reduction in their anxiety or fear of performing incorrectly. This can be beneficial for learners who self-perceive as having underdeveloped speaking skills as they can practice sufficiently until they improve, or that they self-perceive as having improved. Learners with more developed speaking skills were more focused on improving their accuracy than on how they were perceived (see 5.1.1.3 for an example of this).

4.2.4.3 Technical Issues

In the aspect of problems, technical difficulties were only reported by two participants. It is noteworthy that measures were taken by the researcher to try to mitigate technical problems by demonstrating or being available the first time that learners were going to use a web page or an application. The two participants comment that:

“pero igual también mi teléfono no sé por qué no me deja subirlo a veces a ese Schoology entonces batalle por eso con los foros” [Original Version]

“but also my phone, I don't know why, it doesn't let me upload it sometimes to that Schoology, so I struggled for that with the forums” [English Version]

[Final Reflection, S8]

“lo que no me gusto pues creo que sí serían como cositas técnicas lo del Screencast yo batallé mucho para agarrar el rollo vi muchos videos o sea sí- si al final si pude pero si batallaba” [Original Version]

“what I didn't like, I think it would be technical things like the Screencast, I struggled a lot to get the hang of it, I watched a lot of videos, so yes, in the end I was able to do it but I struggled”

[English Version]

[Final Reflection, S29]

“la página tuvo muchos problemas con la página porque cuando recién comenzamos- cuando comenzamos habían muchos comentarios entonces para ello encontrar mi video o porque teníamos- porque teníamos que contestar a las personas que nos habían comentado a nosotros yo batallaba mucho en encontrar mi video o mi audio” [Original Version]

“the site had a lot of problems with the site because when we first started - when we first started there were a lot of comments so to find my video or because we had - because we had to reply to people who had commented to us I struggled a lot to find my video or my audio.” [English Version]

[Final Reflection, S27]

4.2.4.4 Recording Environment

Another difficulty encountered was more related to the participants home context. They reported not have the conditions that would allow them to perform the activities in an optimum manner. An attempt to mitigate this was offering the participants the computer centres available in the University. Their difficulties are evident in comments such as:

“complicaciones que yo tuve fue para el momento de grabarme porque tenía que buscar un espacio pues totalmente- tengo 4 perros entonces están adentro entonces cuando no ladraba 1 era el otro entonces literal yo siempre me grabe en el carro me iba al carro y pues cerraba todo y ahí me tenía

que estar grabando porque no podía encontrar un lugar en mi casa o pues aquí tampoco de totalmente en silencio para concentrarme y para poder grabar todo lo que tenía que grabar”

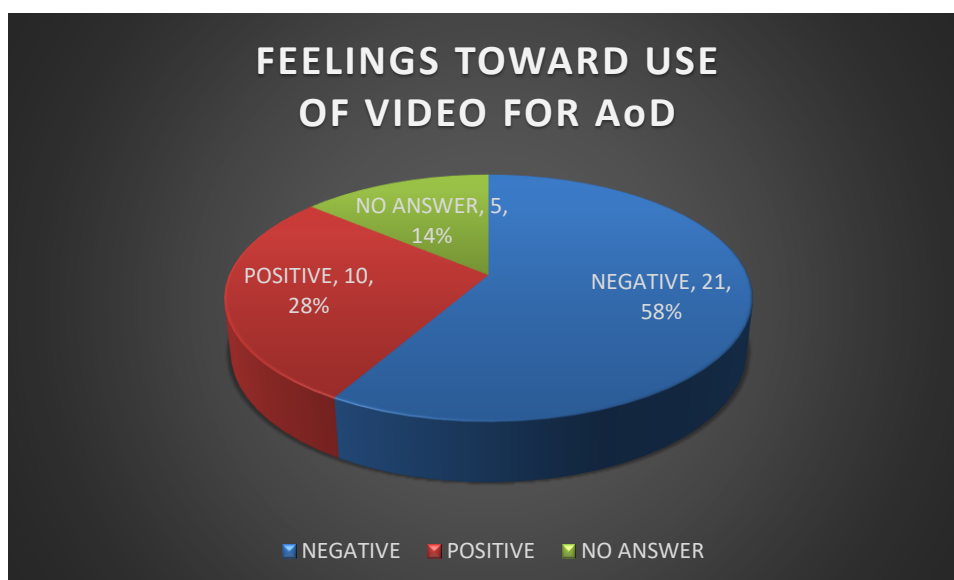
[Original Version]

“complications that I had when it came to recording myself because I had to look for a space - I have 4 dogs so they are inside so when one of them wasn't barking, the other one was barking, so literally I always recorded myself in the car, I would go to the car and close everything and there I had to be recording myself because I couldn't find a place in my house or even here in total silence to concentrate and to be able to record everything I had to record” [English Version]

[Final Reflection, S2]

4.2.4.5 Use of Video

The majority of the participants had negative feelings towards using videos to participate in discussion forums. They refer that it was due to several reasons which include videos being very time consuming, not having time to do them due to personal agendas, their own procrastinating, not having an appropriate environment where to record, not having a good software or hardware to record or not wanting to appear on camera as they felt uncomfortable with how they looked or sounded. Conversely, some participants mentioned having positive feelings towards using videos and a few other participants did not mention their preferences. See the following graph for illustrative purposes:



4.3 Impact Of and On Participant Affective Factors

4.3.1 Motivational Factors

In this section aspects that allowed students to feel more or less motivated to participate or to share with their peers are explored. Aspects such as self-awareness that can have both motivating or demotivating effects depending on the perspective they take on strengths and weaknesses they notice they have. Self-confidence and self-perception can also influence the behaviour that participants display in discussion forums.

4.3.1.1 Self-Awareness

As a result of recording and listening to their own voices, participants seem to have been very self-aware because of how they would “sound” before their classmates, this is consistent with the views of Wilches, (2014). Examples of these are presented in the comments below where they mention the need to work harder, feeling of embarrassment and stress. For instance, when discussing audio contributions S13, S19, and S21 mention that:

“all my classmates were going to listen to my audio and I wanted to have a good fluency so I took a lot of time in the recording time”

[Final Reflection, S13]

“I feel embarrassed because I think that my speaking is not very good as others, but I think that with the time I am getting better”

[Final Reflection, S19]

“I could not help but feel stressed about my audios and videos being heard and seen by my classmates”

[Final Reflection, S21]

Similarly, when watching themselves on video, participants reflected on how they had felt about having to consider their body language, frustration, nervousness. S13, S10, S18, S8, and S31 comment that:

“where we had to use audio were more challenging since I had also to take of my body language”
although by audio, this participant meant video in this quote.

[Final Reflection, S13]

“The only forum that made me a little nervous and embarrassed was the one with the video because I did not want to look dumb to others”

[Final Reflection, S10]

“Another reason I do not participate more often is that I am not a good English speaker, and I feel frustrated when I do not how to say or explain something”

[Final Reflection, S18]

“when the teacher told us we were going to work in forums I was terrified. I thought I am going to fail this class because I hate filming videos and I am bad at speaking”

[Final Reflection, S18]

“I think that I learn a lot, the one thing that I learn most from It are the forums (even when I don’t like them)”

[Final Reflection, S8]

“I think that the voice recordings were okay, I did not like them, but I did not hate them either. My speaking seems to be either the same or worse than it was before the beginning of the semester”

[Final Reflection, S31]

There seems to be a correlation between the feelings towards the activities and the perceived experience. For example, the participants below mention specific activities and being the ones that cause them to feel in a specific way. S30 and S35 explain this particular situation better when arguing that:

“There were times when I feel embarrassed by mispronouncing words while recording the screencast I feel very embarrassed because I did not want my classmates to watch my video”

[Final Reflection, S35]

“When we did the screencast activity to be honest I was really anxious and embarrassed, as you had notice, my pronunciation was really horrible”

[Final Reflection, S30]

“And on the audios I really got nervous because I didn’t know if I was using the right structure, which made me looked like someone that needs to develop more the speaking skills”

[Final Reflection, S30]

“hablo muy rápido entonces al principio hice eso de anotar palabras claves y empezar a grabar y me di cuenta que aun así hablaba muy rápido hablo muy muy rápido y no me daba el tiempo” [Original Version]

“I speak very fast so at the beginning I did that of jotting down key words and start recording but I realized that I was still talking too fast, I speak very very fast and I did not get the times right”

[English Version]

[Final Interview, S37]

4.3.1.2 Self-Confidence

The use of discussion forums appears to also have had an impact on self-confidence, as S36 mentions that interaction with peers who are not close friends, can boost self-esteem. S36 states in excerpt 2 that

“el interactuar con alguien más que a lo mejor no es tu amigo que no es tan cercano a ti creo que es bueno para ti como que por medio de un foro se comuniquen creo que sí puede ayudar a la autoestima del alumno mucho por lo menos yo me sentía bien cuando interactuaba con alguien más que no era tan cerca de mí” [Original Version]

“...interacting with someone else who may not be your friend, who is not as close to you, I think it's good for you, like communicating through a forum I think it can help the student's self-esteem a lot, at least I felt good when interacting with someone else who was not as close to me” [English Version]

[Final Interview, S36]

4.3.1.3 Self-Perception

A number of participants state that they perceive themselves as being introverts and that they feel that discussion forums are perceived as beneficial for them. For instance, in excerpt one below, S14 explains how they, as an introvert, feels more comfortable participating and interacting with classmates during online discussion forums stating that they noticed that those who:

“nos consideramos más introvertidos pudimos salir de nuestro caparazoncito y (.) asomar la cabecita y interactuar hablar” [Original Version]

“{we} consider ourselves more introverted and we were able to come out of our little shell and (.) poke our little heads out and interact, talk” [English Version]

[Final Interview, S14]

Thus, presenting the idea that discussion forums, in this case voice forums, could foster interaction in those who perceive themselves as being introverted. Several participants more perceived themselves as being either introverted or shy. They considered discussion forums as positive for them. For instance, S25 indicated that

“At the beginning I felt embarrassed because we do not normally practice these activities”

[Final Reflection, S25]

S12 also stated, that he

“felt very anxious and embarrassed because I don’t like recording myself”

[Final Reflection, S12]

S24, also mentioned that

“I also think that I improve a lot, because I was very shy and insecure at speaking in English, but now I think I am doing better on that area. I discovered that during my final assessment presentation”

[Final Reflection, S24]

“I feel more relaxed when we had to record and audio because nobody could see my face it was only my voice”

[Final Reflection, S35]

“At first with the forums I was kind of shy to talk to the recorder because I have had issues with my voice and the tone”

[Final Reflection, S37]

Data seems to present asynchronous online discussion forums as a positive experience for those who perceive themselves as shy. It seems that the lack of immediacy in the expected response allows students to participate on their own time and pace, which can be important for shy students who need more time to process their feelings and thoughts before sharing them with others. Moreover, instructors, by establishing non-anonymity and clear rules about the type of language to be used in forums, can assist in creating an environment where they can feel safe and comfortable which can lead to them taking more risks or challenge themselves in terms of spoken production.

4.4 Summary

In sum, participants do not display an improvement in pre and post tests, although test conditions might have affected the results. The majority showed a positive perspective towards designing forums, they appreciated teacher presence and indicated that their own input on designing forums was motivating. In regards to task simplicity they prefer easy tasks as that allows them to integrate the grammar points more easily. They asked for instructions to be brief but detailed and having time and reply limits preferring one submission deadline to more than one because they got confused with the deadlines.

Participants also agreed with limiting the amount of replies a single participant could have as this allowed interaction for all the students. In terms of length of audios, they were in favour of having a range of time for them to decide. The strategies reported were writing what they were going to say, before recording it, rehearsing what they were going to record, correcting and rerecording if they felt something was not as they wanted it to be as well as searching information on the Internet to better complete the tasks, all of them are consistent with literature. They reported a decrease over time in the amount of time they spent preparing their contributions through rehearsing and that they were able to reduce the times they re-recorded their contributions before posting to correct mistakes.

The majority expressed they felt they had improved in speaking. Participants also report feeling a sense of community or integration due to the discussion forums because they used topics they proposed and liked, and were able to know likes of other students that were similar to theirs or simply interesting. More than half reported that they would use discussion forums as a tool as teachers.

To conclude, they also reported that previous experiences with forums shaped their views on forums. Also, that anxiety was present because other would listen to them, and 58% indicated not liking videos. A few reported technical difficulties and finding spaces to contribute where they could be in silence. They stated being aware of their mistakes and feeling more self-confident when they were able to interact with someone they had not interacted before. Participants who identified themselves as being shy reported that the forums were a good place for them to participate and slowly started feeling more relaxed.

Chapter 5 Impact of Voice-Based Discussion Forums on a Blended Language Learning Experience: Representative Participants

5.1 Individual Participants

Five participants of interest were selected to be analysed more in detail (see section 3.6). They were selected because there is a balance between those who improved and those who did not, having three participants who did worse and two who did better, even though changes were minimal. A graph showing the results of these candidates is presented below and it is noteworthy that out of the three participants who did slightly worse on the post-test, only one reported to identify herself as being introverted or quiet, but mentions not being shy around her friends and they all reported to have been in contact with English either in bilingual schools or actually living in an English-speaking country, in this case the USA. Results represent their individuality, this is displayed better in the themes and subthemes appearing in the Nvivo analysis of each one.

On the contrary, the two ones that show a slight improvement, consider themselves to be introverted or shy and one states not having enough contact with English at a young age. Also, they did not show a high speaking score in the pre-test. One of the participants, Gerardo, shows a 0.2 improvement but is not evident due to the rounding of decimals. See graph below for a comparison of pre and post scores for each of the participants of interest selected to be explored in depth for this study.

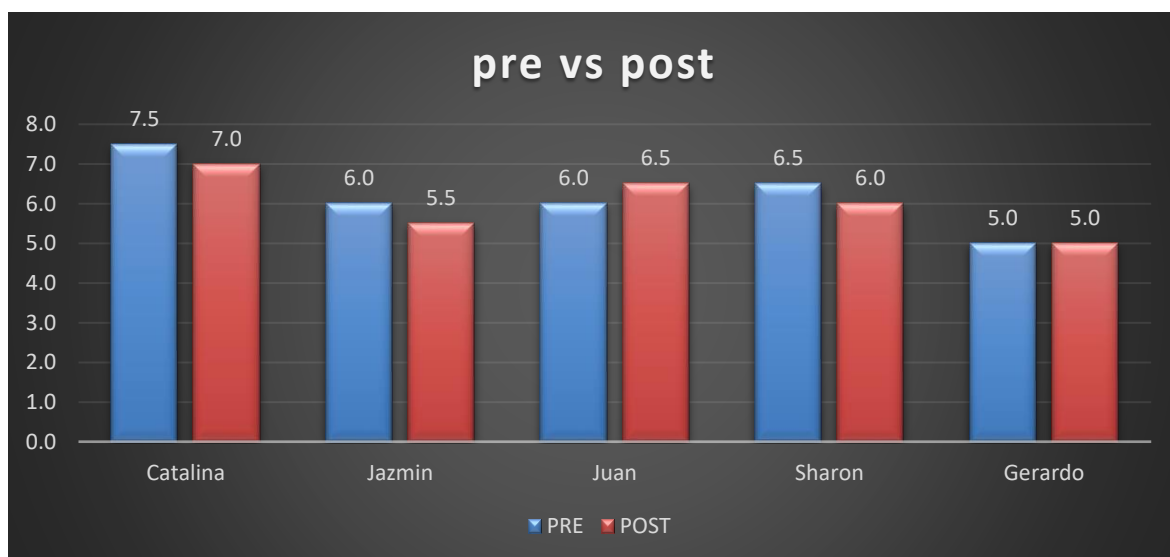


Figure 14. Difference between pre and post test scores by individual participants selected

5.1.1 Catalina

5.1.1.1 Previous Contact with English

The first participant of interest for this study is S7, hereinafter referred to as Catalina. She is a pre-service teacher with a high speaking skill as per her results in the pre and post-tests and class observation by researcher. She is a learner who had a high contact with English before attending university in Mexico, as indicated in one of their comments:

“I learned English mainly because I lived part of my life on the United States, I spent the first 3 years of elementary school there and I think I owe my good (I think) pronunciation to that part of my life, but I didn’t learn much about grammar and complex things since I was very little.” [original version]

[Course Reflection, Catalina].

5.1.1.2 Self-perceived Personality

An aspect considered for selecting the candidates was their self-perceived personality being shyness or extroversion the most common terms used and although participants tended to say them, no participant defined such terms. In particular, Catalina states, in her mother tongue, that

“no me considero introvertida demasiado pero tampoco extrovertida pero diría que no me gusta como que toda la atención en mí no me gusta recibir tanta atención, no que me ignoren, pero tampoco tanto” [original version]

“I do not consider myself introverted too much nor extroverted, but would say that I do not like all the attention in me, I do not like to receive so much attention, I don’t mean to be ignored, but not so much” [English version]

[Course Reflection, Catalina.]

5.1.1.3 Perceived Linguistic Improvement

Another aspect of interest for this analysis is their perceived linguistic improvement to which Catalina mentions she *“feel these activities helped me improve my speaking in the sense that I had to use certain grammar when I spoke, which I was not used to so it was interesting and challenging to do”* [Course Reflection, Catalina]. This is interesting as they mention a perceived improvement in spoken production although pre and post-tests do not show an improvement as shown in the graph below and Catalina did not know that the data showed no improvement from her pre to her post test on spoken production when she mentioned this. She further mentions this perceived improvement in spoken production when stating that:

“me sirvió para hablar para speaking así más que nada y listening también o sea conversaciones más como de la vida diaria por qué lenguaje no era tan formal entonces pues siento que aprendí a comprender y también puedes hablar más fluido” [original version]

“it helped me to speak, for speaking more than anything else and listening as well, that is, conversations more like everyday life because the language was not so formal, so I feel that I learned to understand and you can also speak more fluently” [English version]

[Final Interview, Catalina]

In this case, she specifically mentions fluency from the aspects of spoken production, Catalina reinforces this idea when stating that *“lo que dije de speaking de fluidez”* or **“what I said about speaking fluency”** in English, which is what Catalina feels improved; finally, when asked whether she thought discussion forums had had an impact on fluency, she specifically answered **“yes”** [Final Interview, Catalina.]

However, as shown in the following graph, between the first test (blue bar) and the second test (red bar) there is a negative difference in the scores for Catalina. Hence, this could support the idea that the difference in test conditions between the pre and the post-tests could have influenced the results.

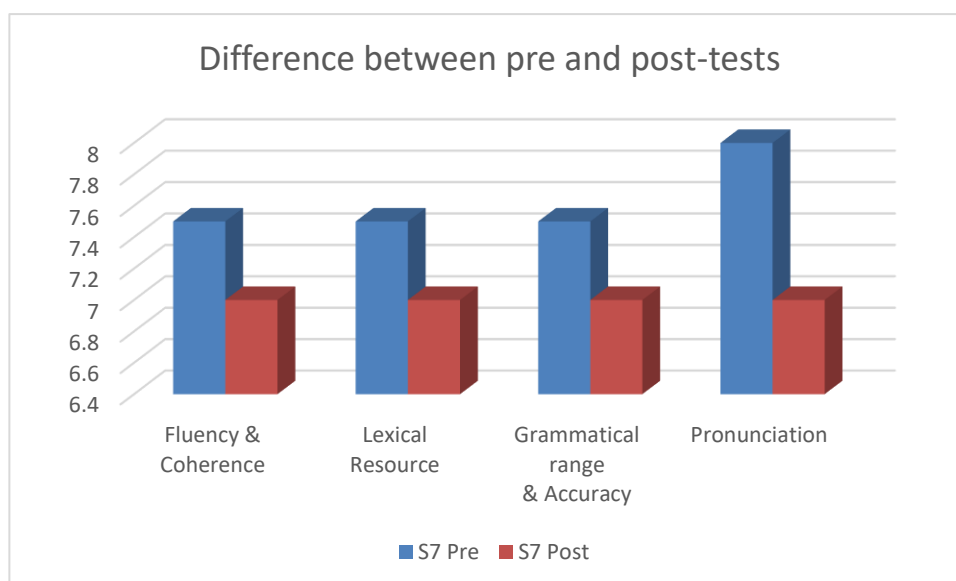


Figure 15. Comparison between pre and post test scores for Catalina (S7)

5.1.1.4 Preferences

In terms of preference in the use of asynchronous online discussion forums and their tasks, the opinion of this particular participant was in favour of the personalization of the activities as can be understood from her following comment

“la familia y se me hizo interesante porque estaba viendo las fotos de todos y eso me interesó pero escrito y dije no pues qué aburrido” [original version]

“the family and I found it interesting because I was looking at everyone’s pictures and I was interested in that but in writing and I said no, it’s boring” [English version]

[Final Interview, Catalina]

Using voice contributions instead of text was planned to be an innovative manner of working with spoken production and Catalina was in favour of using these voice contributions as evidenced by her comment:

“cuando ya puso los audios cómo que ya me gustó, los vídeos no, por los audios sí” [Original version]

“When you put the audios, I kind of liked it, not the videos, but the audios I did” [English version]

[Final Interview, Catalina.]

5.1.1.5 Impact of Images

Another aspect that appeared, as mentioned by this participant, is the impact that images had when preparing her contributions for the AoDs. She seems to suggest that images might assist in the development of fluency at the time of posting their contributions to asynchronous online discussion forums, she specifically says that

“no escribí nada en el que era grabando porque ya me acordaba yo o sea no se me olvidaba nada porque estaba viendo las imágenes pues” [Original version]

“I did not write anything in the one that was recorded because I already remembered it, that is, I didn’t forget anything because I was watching the images” [English version]

[Final Interview, Catalina]

5.1.1.6 Speaking Practice

One more aspect mentioned by this participant is that she feels she does not have sufficient opportunities to practice their speaking skills and asynchronous online discussion forums (AoDs) provide this opportunity as stated in the following utterance:

“a veces no practico tanto siento que en el salón pues no entonces lo vi como una práctica para conversación” [English version]

“sometimes I don’t practice as much, I feel, in the classroom, so then, I see it as practice for conversation” [English version]

[Final Interview, Catalina]

Catalina lived in an English-speaking country when she was young and indicates that they do not have sufficient practice of the speaking skill during their classes in the BA.

5.1.1.7 **Sense of Community**

Another feature that was raised during the final interview was sense of community or class integration, understood as how learners in a class relate to each other and get to know each other as well. In this matter, Catalina states that:

“aprendí más de mis compañeros o sea como que los conocí un poquito más” [original version]

“I learned more about my classmates, I got to know them a little bit better” [English version]

[Final Interview, Catalina.]

After Catalina raised the point of getting to know her classmates better, she was asked what effect would getting to know them have, to what she replied:

“pues sentirme más cómoda en el salón tal vez como que más confianza” [Original version]

“well, to feel more comfortable in the classroom, maybe like more trust” [English version]

[Final Interview, Catalina.]

5.1.1.8 **Motivation**

A feature that appeared to have an important impact through the experience of the AoDs was motivation; for the case of Catalina, she mentions that her interest was fostered by the personalization of the AoD tasks, this is shown in her comment:

“me gustaron los temas que fueron muy como personales de así como que despertó más interés en mí” [Original version]

“I liked the topics that were very like personal, they kind of sparked more interest in me” [English version]

[Final Interview, Catalina.]

5.1.1.9 **Cooperative Design**

Another aspect that had more impact than expected was the cooperative nature of the design of the forums (see 3.4). The last four forums were designed by participants to be later experienced by themselves but with some indications by the researcher (such as: for forum number two, they were told that they could only have interactions in audio, for forum number three, they could only have interactions in video and for forums three and four they could decide whether to have

interactions with audio or video), this concept of being able to decide the topics to be used for the forum was found to be appealing by Catalina as shown in her statement:

“me gustó mucho que lo- que nosotros pudiéramos decidir el tema o que pudiéramos modificar de que si queríamos audio o por escrito o así” [Original version]

“I really liked that the-that we could decide the topic or that we could modify whether we wanted it in audio or in writing or so on” [English version]

[Final Interview, Catalina]

An unexpected situation with the cooperative design of the forums was classroom dynamics in the sense that during the voting made for selecting the discussion forum plan option that participants liked the best so as to be used in their next discussion forum task, Catalina would not vote for a good forum task plan if it came from a person she disliked as is shown below:

“siento que a veces era personal de que por ejemplo bueno yo no sé ustedes, pero yo, cuando me caía mal a alguien, cuando no era mi amiga, yo si decía no, pues no voy a votar por ella, y si alguien era mi amigo pues decía qué pues voy a votar por ellos aunque me gusta mucho el tema de alguien no voy a decir nombres pero si era que no, no voy a votar por ella” [original version]

“I feel that sometimes it was personal in that, for example, well, I don't know about you but when I disliked someone, when she was not my friend, I would say no well I'm not going to vote for her and if someone was my friend, well, I would say what well I'm going to vote for them even though I really like the subject of someone else, I'm not going to say names but it sure was a no, I'm not going to vote for her” [English version]

[Final Interview, Catalina]

5.1.1.10 Time Limitations

Another part of interest in the design of tasks was the length of the file requested for the contributions in the forums. Occasionally, Catalina says that she had to do work again or to change some things that she wanted to say due to time limitations, she stated for example that

“a veces me sentía limitada por el tiempo de que por ejemplo a veces me salía menos tiempo de lo que pedí a usted entonces lo tenía que volver a grabar y agregar cosas”. [original version]

“Sometimes I felt limited by the time, for example, sometimes I got less time than you asked for, so I had to re-record it and add things” [English version]

[Final Interview, Catalina.]

She also offered an idea to solve this by saying that

“tal vez hacerlo aún más extendido de que a lo mejor quieres de 40 a un minuto 20 o algo así tampoco tan largo porque pues no sé siento que les va a dar flojera escuchar uno tan largo” [original version]

“maybe make it even more extended, maybe you want from 40 to one minute 20 or something like that, not so long because I don't know, I feel that they would not want to listen to one so long.”

[English version]

[Final Interview, Catalina.]

Interestingly, these instructions with time limits were incorporated in the last two forums task design and twenty-seven out of the thirty-six participants reported positive feelings towards these time limit range put to the audio files to be used for contributing in the forums.

5.1.1.11 Grammar Constraints

One other aspect mentioned by Catalina when working with asynchronous online discussion forums is having to use a specific grammar point in her contributions, she states that using the grammar to post her contribution was easy, but using it to interact became more complicated, or as she stated

“al principio mandarlo nosotras el nuestro se me hacía más fácil pues, pero ya contestar sí como que me limitaba más que a veces no quedaba con lo que quería contestar para usar la gramática que pedía” [original version]

“at the beginning it was easier for me to send ours, but answering it limited me more because sometimes it didn't fit with what I wanted to answer in order to use the grammar asked for.”

[English version]

[Final Interview, Catalina.]

And when asked whether she had had to change what she wanted to say because grammar limited her, she said *“uy sí, muchas veces”* or in English ***“definitely yes, many times”***

[Final Interview, Catalina.]

5.1.1.12 Reflection as Future Teacher

During the feedback for each of the forums, participants were asked how they would give that particular task to their future students, the intention was to foster reflection and Catalina stated that

“para mi futuro como maestra sería algo que sí le pondría a mis alumnos porque se me hizo una actividad pues un poquito más dinámica y más padre específicamente con el enfoque de temas más personales personalizados” [original version]

“for my future as a teacher, it would be something that I would give to my students because it was an activity that was a little more dynamic and more fun, specifically with a focus on more personal and personalized topics” [English version]

[Final Interview, Catalina.]

5.1.2 Jazmin

5.1.2.1 Previous Contact with English

This second participant of interest for this study is S12, referred to as Jazmin from this point on, she had a moderate to high contact with English before attending university, as mentioned in one of their contributions:

“I learned English with my father’s help, he used to talk with me in English and he always listened to music in English. I also learnt in elementary school” [original version]

[Course Reflection, Jazmin]

5.1.2.2 Self-perceived Personality

Jazmin’s self-perceived personality is more inclined to being shy than extroverted as per researcher observation and as stated in her following remarks

“yo me considero una persona introvertida pero en algunas ocasiones depende de la situación pues sería un poco extrovertida pues con los trabajos me gusta trabajar en equipo pero prefiero trabajar sola” [original version]

“I consider myself an introverted person but sometimes, depending on the situation, I would be a bit extroverted because with classwork I like to work in teams but I prefer to work alone” [English version]

“no me gusta escuchar mis audios ya después de grabarlos” [original version]

“I don’t like to listen to my audios after recording them” [English version]

“no me gusta presentar no me gusta para nada presentar” [original version]

“I don’t like to present I don’t like to present at all” [English version]

“no puedo exponer en clase, siento mucha ansiedad” [original version]

"I can't present in class, I feel a lot of anxiety." [English version]

[Final Interview, Jazmin]

5.1.2.3 Motivation

In general, Jazmin indicates that a reduced motivation for becoming an English teacher which could account for her low perceived motivation as evidenced by her comments

"I think that I lost motivation when I entered the B.A. because I did not wanted to study to be a teacher" [Course Reflection, Jazmin].

"I felt very anxious and embarrassed because I don't like recording myself" [Course Reflexion, Jazmin]

5.1.2.4 Perceived Linguistic Improvement

In terms of perceived linguistic improvement, Jazmin states that she thinks her *"speaking skills improved with the help of these activities but mostly because I practice a lot at work"* [Course Reflection, Jazmin.] In general she believes that AoDs did not help her very much although she mentions a perceived benefit in pronunciation when saying:

"en audio se me hizo mas fácil porque ya había practicado y pues también ayuda mucho para practicar pronunciación y como ya había practicado usando speech(?) para la pronunciación pues si me sirvió" [original version]

"in audio it was easier because I had already practiced and it also helps a lot to practice pronunciation and since I had already practiced using speech(?) for pronunciation, it helped me"
[English version]

[Final Interview, Jazmin]

The next graph shows a better result in the pre-test than in the post-test for each one of the linguistic elements explored which can be explained by test conditions as explained above and by the lack of motivation expressed by Jazmin.

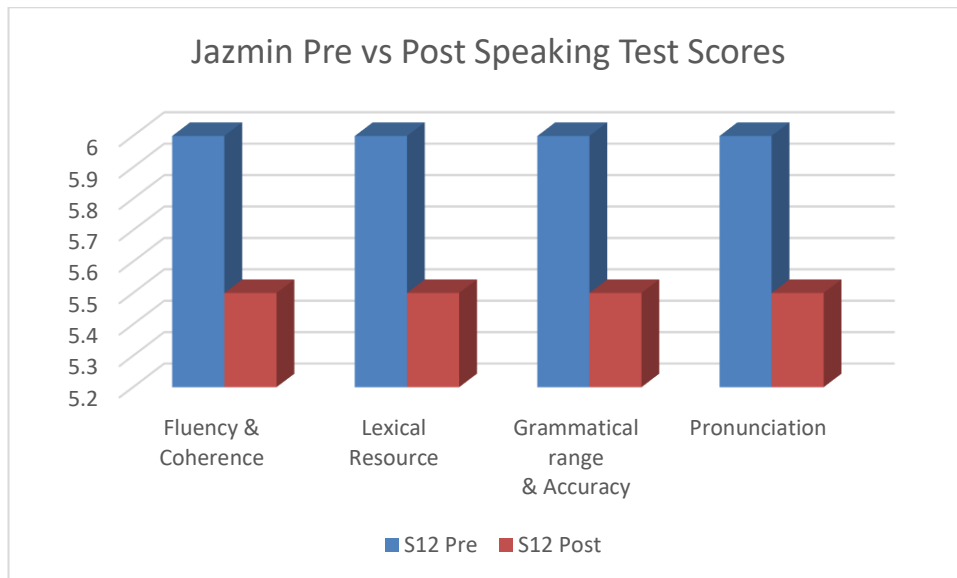


Figure 16. Jazmin Pre vs Post Speaking Test Scores

5.1.1.2.5 Preferences

In terms of preferences, Jazmin was very clear with her negative feelings towards being recorded in video as evidenced in her following comments:

"no me gusta grabarme o mas bien o yo creo que no tengo el equipo para hacerlo y no o sea no me gusto la idea de grabarme" [original version]

"I don't like to record myself or rather I don't think I have the equipment to do it and I don't like the idea of recording myself" [English version]

"lo que no me gusto fue lo del screencast porque pues no teníamos otra opción más que usar screencast" [original version]

"What I didn't like was the screencast because we had no choice but to use screencast" [English version]

[Final Interview, Jazmin]

On the other end, she refers having positive feelings towards the personalization of topics, when asked what she had liked about designing and answering the AoDs, she commented that

"lo que más me gusto, igual que mis compañeros, fueron los temas y que pues tomara en cuenta nuestras opiniones" [Original version]

"What I liked the most, as well as my classmates, were the topics and the fact that our opinions were taken into account." [English version]

[Final Interview, Jazmin]

Jazmin specifically stated in all five AoDs evaluation sheets that she had liked the topics of each one of the forums. She did not mention the collaborative process of designing them, but she indicated liking the personalized topics.

5.1.2.6 Strategies for Contributing on the AoDs

Another feature present in the participations by Jazmin was preparing her contributions before actually posting. For example, for one of the forums when asked how she contributed, she stated that she:

“busca la sinopsis y aparte en el celular pues hice mis notas de que no pues trata de esto y así así y asa, entonces al momento de grabar yo estaba leyendo desde el celular, estaba grabando mi computadora y estaba leyendo desde el celular” [original version]

“look for the synopsis and on the cell phone I made my notes, that it's about this and so on and so forth, so at the time of recording I was reading from my cell phone, I was recording on my computer and I was reading from my cell phone” [English version]

[Final Interview, Jazmin]

After that, she was asked whether she had done the same for all the other four forums and she said yes.

5.1.3 Juan

5.1.3.1 Previous Contact with English

For the third participant, S15, hereinafter referred to as Juan, he indicates a moderate contact with English before enrolling in the BA in ELT, evidence of this is his mentioning that:

“our formal learning began when we took English classes at the Harmon Hall institution. We did not finish the endless courses, but we got familiarized with the target language” and ***“I had taken English classes on public education, as it is a topic I’m usually familiar with, and teachers normally tend to be more interested in teaching than on other classes”***

[Course Reflection, Juan.]

5.1.3.2 Self-perceived Personality

Perceived personality might have an impact on the willingness to participate in class, this participant, Juan, perceives himself as leaning towards a shy personality, when asked to talk about himself, he answered:

“me considero como una persona introvertida de no ser necesario regularmente trato de sólo mantener mi espacio pero si se requiere mantener una actitud conforme a los demás trato de ser una persona extrovertida no sé por qué pero siempre trato de entretener a las personas y hacer que se sientan bien no sé que también me vaya con eso ((risas)) pero es el intento”

[original version]

“I consider myself as a shy person. If not necessary, I regularly try to just keep my space but if it is required to keep an attitude similar to others I try to be an extroverted person; I don't know why but I always try to entertain people and make them feel good I don't know how well I'm going with that ((laughs)) but I try” [English version]

“con respecto a los trabajo yo siempre prefiero trabajar solo porque siento que a la única persona que estoy poniendo en riesgo soy yo y se cuando son mis tiempos y cuándo hacer las cosas” [original version]

“regarding class work I always prefer to work alone because I feel that the only person I am putting at risk is me and I know my times and when to do things” [English version]

[Final Interview, Juan]

5.1.3.3 Perceived Linguistic Improvement

The aspect of perceived linguistic improvement had contrasting results with Juan, he states that pronunciation is important for language learning and that the forums provided a space for him to practice as he states that

“Practicing pronunciation is of crucial importance in language learning. Being able to use these spaces to do so was of great help. Sometimes we just talk and ramble without considering concise language, and with the timed activities, every word counted” [Course Reflection, Juan.]

However, when asked whether he felt if there was an improvement in either speaking or writing as a result of participating in this project, the answer Juan provided was:

“voy a decir que no pero no es por como se manejó la clase [R: no te preocupes puedes decirlo no soy tu maestro ahorita soy investigador] ah okay porque yo en si desde antes yo ya manejaba grabarme a mi mismo” [original version]

“I'm going to say no but it's not because of how the class was handled [R: don't worry you can say it I'm not your teacher right now I'm a researcher] ah okay because I already used to record myself before” [English version]

[Final Interview, Juan]

He does however mention a perceived improvement in fluency by stating that

“lo empecé a practicar mejor cómo decir las ideas a bueno en vez de decir estas palabras puedes ir estás que me ayudan a decir más rápido lo que quiero decir” [original version]

“I started to practice better how to say the ideas, like well instead of saying these words these ones can go that help me to say what I want to say faster” [English version]

[Final Interview, Juan.]

As shown in the next graph of pre and post speaking test scores, Juan improved in fluency, which matches his perception, but he also improved in lexical resource and grammatical range which he did not perceive. The only aspect that remained unchanged was pronunciation.

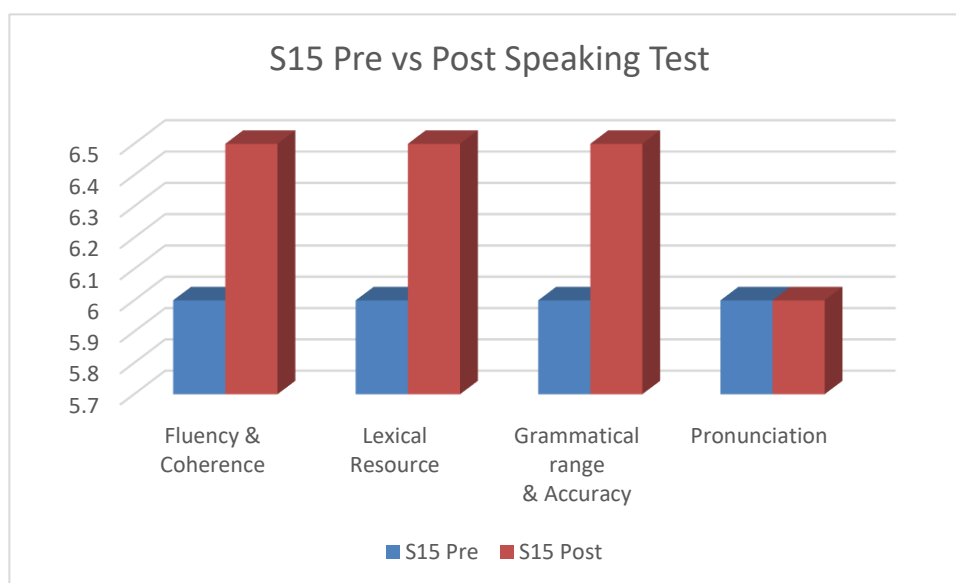


Figure 17. Juan Pre vs Post Speaking Test Scores

5.1.3.4 Strategies for Contributing on the AoDs

Similar to other participants, before contributing, when asked what he did before contributing, he mentioned that he first researched what he wanted to post in the forums and then posted it, as shown in his comment:

“sí investigaba un poco lo que quería decir antes de decirlo” [Original version]

“I did do some research on what I wanted to say before I said it.” [English version]

[Final Interview, Juan]

Another strategy he also mentioned was that he explored examples before actually contributing himself so as to give himself an idea of what to do. When asked why he did that, he answered:

“porque quería ver primero como ellos lo estaban haciendo para decir bueno yo lo estoy haciendo bien o lo estoy haciendo mal y pues tomaba lo ejemplos y decía ah bueno pues si usaron lo que está pidiendo” [original version]

“because I wanted to see first how they were doing it to say well I'm doing it right or I'm doing it wrong and then I would take the examples and say oh well, they used what is being asked for”

[English version]

[Final Interview, Juan]

This can indicate that teacher demonstration is important in classes, in contrast to only writing instructions since participants compared instructions to what others were doing and used this as a basis to contribute, and not only the instructions.

Finally, Juan also noticed that there was little repetition in speech produced by his classmates, he sensed there was analysis and practice before uploading their posts, this is evidenced in his comment:

“se nota que también que lo están diciendo también de manera concisa porque era rara- raras las veces que me tocaba escuchar a compañeros que como repetían lo mismo dentro del mismo audio o que se corregían” [original version]

“it is noticeable that they are also saying it in a concise way because it was uncommon-uncommon the time that I heard classmates repeating the same thing in the same audio or correcting themselves” [English version]

[Final Interview, Juan]

This comment is notable because it indicates that participants might be able to differentiate between spontaneous speech with repetition and self-correction versus prepared speech which is perceived as more accurate and concise. This reaffirms the literature on asynchronous online discussion forums stating that accuracy is enhanced with these types of tasks (see 2.4.5).

5.1.3.5 Engagement

Another aspect that was noteworthy from Juan is preferences, or likes in the topics selected for the tasks, which seem to have an impact on engagement. It is difficult to determine if engagement is achieved or not but, in this case, it seems to be assisted by using their preferences for designing activities. As Juan mentions, when something is interesting, he feels more engaged leading him to spend more time on the task, as evidenced in his comments below

“habían casos que solamente lo veía ah y respindia pero si habían casos que decía ah esto me parece interesante y tardaba mas tiempo pensando en que decir que lo que era grabar” [original version]

“there were cases where I only saw it, ah, and answered, but there were cases where I would say, ah, this looks interesting, and it took me longer to think of what to say than to record.” [English version]

[Final Interview, Juan]

Juan specifically recalled an instance where the forum task was related to guessing a song of which his partners were posting. When asked about it, he answered that:

“uno de los ejemplos era con respecto una canción favorita y me puse cual es mi canción favorita? Y pues estuve pasando mas de la hora escuchando mis propios soundtracks diciendo cual es el que mas me gusta?” [original version]

“one of the examples was about a favorite song and I asked myself what is my favorite song? And I spent more than an hour listening to my own soundtracks saying which one do I like the most?”

[English version]

[Final Interview, Juan]

5.1.3.6 Collaborative Design

Another aspect reported to have a perceived positive impact was the collaborative aspect in the design of tasks for the discussion forums. The fact that they participated in the design and selection of topics seems to have had an important effect, when asked about what he had liked about the project, he stated that

“los temas que era mas pues de mas interés común y mas porque lo fuimos armando conforme a las clases” [original version]

“the topics that were of more common interest and more because we were putting it together as classes advanced.” [English version]

[Final Interview, Juan]

In addition, the process of designing and making changes to their next design, in line with their own feedback, seems to have contributed to this engagement or positive perception of the activities, or as mentioned by Juan:

“que íbamos dando feedback si nos gustaba esto si no nos gustaba que se puede hacer para la siguiente actividad y pues era algo que todos estábamos participando activamente (.) me gustó pues sí eso” [original version]

“that we were giving feedback, whether we liked this, whether we didn't like it, what could be done for the next activity, and it was something that we were all actively participating in (.) I liked that.” [English version]

[Final Interview, Juan]

This appears to show a link between the collaborative design of tasks for them to perform and self-assess, and their engagement or motivation in performing such tasks.

5.1.3.7 Sense of Community

Another aspect mentioned by Juan as having a positive impact is the sense of community. It seems that AoDs promoted openness to communicate, to talk about personal preferences, and in turn this made it possible for participants to get to know each other better. When questioned about what other aspects of the project he had liked, he replied:

“también me gusto es vamos a decir que entonces había buen rapport en lo que es el grupo porque de haber poco interés nadie hubiera hablado de cosas que en realidad a nadie le interesan habrían dicho ah pues voy a poner cualquier canción del momento de Bruno Mars o quien sea para que la adivinen pero si todos los alumnos pues vamos a decir se arriesgaron a hablar un poco de ellos diciendo ah esto es lo que a mi me gusta y es algo que significa para mi” [original version]

“I also liked is, let's say that then there was a good rapport in what is the group because if there had been little interest nobody would have talked about things that really nobody is interested in, they would have said ah well I'm going to put any song of the moment of Bruno Mars or whoever to guess it, but if all the students then let's say they risked to talk a little about themselves saying, ah this is what I like and it means something to me” [English version]

[Final Interview, Juan]

5.1.3.8 Community of Inquiry (CoI): Teacher Presence

Being able to let participants know that someone is reading their contributions, that they are not alone writing is an important part of Teacher Presence of the Community of Inquiry (Refer to section 2.4.6.1). Particularly in its aspect of assessment, teacher presence was valued by Juan, when asked about his contributions to the AoDs, he commented about seeing the “like” button pressed by the teacher, he said that the

“maestro que le daba digamos like ahí dentro del grupo decía ah okay sí está viendo que estamos trabajando esto o sea porque subía y sí le daba like a algunos y luego otro tiempo le daba like a otros” [original version]

“teacher who gave it, let's say, a like there within the group, I'd said ah okay, yes, he is seeing that we are working on this, that is because he would go up and would give like to some and then at another time he would give like to others” [English version]

[Final Interview, Juan]

Using a “like” button is a very limited form of as teacher presence or feedback, it is more of a way to acknowledge the work of the learners and to motivate them to continue knowing that their instructor is reviewing their work. Specific feedback to individual students should be provided at a time considered by the instructor whereby positive and negative aspects of their performance can be assessed. Otherwise, learners will limit their contributions to basic comments so that their contributions appear. For this particular research, learners’ contributions were analysed and given feedback after the forum was over.

5.1.3.9 Reflection as Future Teacher

Juan, as a pre-service teacher, also reflected into the future of his professional practice when analysing the way in which the designs of the AoDs were performed. He arrived to the conclusion that teachers have to seek to create genuine interest on the part of their students in their classes. This is evidenced in his comment:

“cuando estábamos pues en clase se veía como la dinámica de que ah pues yo soy el alumno y pues, el maestro es el maestro, era difícil de verlo como en tercera persona y ver como se está manejando como observando (.) pero digamos ya en este momento pues podemos decir, ah bueno, pues hubo cierto interés para crear rapport entre los alumnos, obviamente que los temas fueran de interés y que no, no fuera solo una investigación de ah pues nomas vamos a hacerlo nomas porque tenemos que hacerlo sino que hubiera interés genuino en participar y pues obviamente conseguir información”
[original version]

“when we were in class it was seen as the dynamic that ah well, I am the student and well, the teacher is the teacher, it was difficult to see it as in third person and see how it is being handled while observing (.) but let's say at this moment we can say, ah well, well, there was some interest to create rapport among the students, obviously that the topics were of interest and that it was not just a research of ah well we are just going to do it just because we have to do it but that there would be a genuine interest in participating and obviously in getting information” [English version]

[Final Interview, Juan]

Juan further reflects on his future teaching and how he needs to consider his students’ interests when preparing and imparting his classes by saying that

“uno como maestro tiene que enfocarse también en las necesidades de los alumnos a tratar de ajustar a sus intereses” [original version]

“one, as a teacher, has to focus also on the needs of the students to try to adjust to their interests” [English version]

[Final Interview, Juan]

5.1.3.10 Time Limitations

Juan also indicated that AoDs in the form of discussion forums with contributions that were restricted in terms of time or any other constraint aided in becoming more concise mentioning that it represented a challenge because it was something he had not done before, he stated that

“me había tocado mencionaba anteriormente hablar de manera seguida pero tal vez no de una manera analítica” [original version]

“I had previously mentioned that I had spoken in a consecutive way, but perhaps not in an analytical way” [English version]

[Final Interview, Juan]

Juan referred to the fact that they had to consider several aspects when contributing on the discussion forums (such as time constraints, grammar point to be used, topic to be followed, etc). He evidenced how this series of constraints represented, in terms of completing his tasks, a challenge by mentioning that

“la cual tengo que decir bueno tengo este espacio de tiempo para dar a conocer una idea que era pues 30 segundos 40 segundos y cuales eran digamos las palabras más concisas que ayudan a llegar a esta idea” [original version]

“which I have to say well I have this time frame to present an idea that was 30 seconds 40 seconds and, which were, let's say, the most concise words that help to reach this idea” [English version]

[Final Interview, Juan]

5.1.4 Sharon

5.1.4.1 Previous Contact with English

For the next participant we have Sharon, a learner who had a high contact with English in her early years as well as motivation. When asked to talk about herself, she evidenced this by mentioning that she:

“had English classes since kindergarten and it has been my favourite subject ever since then. However, these classes did not have a plan where I could feel that I was improving”

“When I was 14 years old, I entered to the general courses (of English)”

“I loved my classes and my teachers. I improved my English skills a lot. I finished all the levels up to conversation class”

“when I was in High School ... I chose the area of English. There I learned a lot about academic writing and business etiquette”

[Course reflection, Sharon.]

5.1.4.2 Self-perceived Personality

Sharon considers herself as neither a shy nor extroverted person, she is just serious, or as mentioned by her:

“yo me considero una persona seria pero en clase me gusta participar mucho (.) es todo” [original version]

“I consider myself a serious person but in class I like to participate a lot (.) that's all”. [English version]

[Final Interview, Sharon]

5.1.4.3 Perceived Linguistic Improvement

Sharon reports feeling that she improved in fluency or that the forums helped her organize her ideas faster, or as she mentions in her mother tongue

“como que acomodaba rápido ya mis ideas por ejemplo para el último speaking test todo lo tenía que pensar más rápido y ya (.) lo decía” [original version]

“I kind of put my ideas in order faster, for example, for the last speaking test I had to think everything faster and then that's it (.) I would say it.” [English version]

[Final Interview, Sharon]

An interesting point raised by Sharon is that AoDs in the form of discussion forums did not feel as spontaneous or natural as a usual everyday conversation, although she does feel they help to improve speaking as shown in her following comment

“I still struggle when I speak so these activities were really helpful to keep practicing and keep improving. Nonetheless, I think that these activities are not so spontaneous nor real. Since we have to speak for a specific period of time, we must prepare everything we are going to say before actually speaking” [Course reflection, Sharon]

5.1.4.4 Future Teaching Reflection

For Sharon, AoDs also helped in reflecting on future teaching practice. She undertook the design and implementation of discussion forums as an opportunity to learn about what she could do in her future practicum. She mentioned that it was not only

“una actividad más que teníamos que hacer sino también como ver los pasos o qué cosas es importante incluir o qué no incluir a mí sí me ayudó como que en mi futuro poder aplicar ese foro en mis clases” [original version]

“one more activity that we had to do but also how to see the steps or what things are important to include or what not to include, it helped me so that I could be able to apply this forum in my future classes” [English version]

[Final Interview, Sharon]

This project seems to have fostered much reflection, and appears to have led her to the conclusion that considering differences between groups is very important, this is implied as per her remarks

“igual creo que depende mucho del grupo a lo mejor con otros grupos van a querer otras cosas diferentes entonces sí está muy bien lo de incluir mucho su retroalimentación” [original version]

“I think it depends a lot on the group, maybe with other groups they will want different things, so it is very good to include their feedback”. [English version]

[Final Interview, Sharon]

Furthermore, it appears that the feedback process after actually completing every task in each one of the five discussion forums is considered as having a central role in the design of AoDs, or as mentioned by Sharon

“no esperaba que fuera la retroalimentación algo que ayudaría” [original version]

“I did not expect feedback to be something that would help”. [English version]

[Final Interview, Sharon]

5.1.4.5 Sense of Community

Sharon feels AoDs helped in class integration, she thinks that discussion forums assisted in improving peer relationships. She elaborates on this idea by saying that

“me gusto qué qué había mucha comunicación fue una forma de comunicarnos diferentes y también de conocernos como mencionan” [original version]

“I liked that there was a lot of communication, it was a different way of communicating and also to get to know each other as it is mentioned”. [English version]

[Final Interview, Sharon]

Sharon adds that communication through discussion forums may not be as natural, but coincides that it did help to foster the sharing of ideas with the class. She shows this by mentioning that

“lo único que sentía como que de repente se podía hacer no tan natural pero en si, sí compartíamos todas nuestras ideas” [original version]

“the only thing I felt was that it suddenly could become not so natural, but in fact, we all did share our ideas” [English version]

[Final Interview, Sharon]

She then complements saying that a way to mitigate it could be by adding minimum times of contribution instead of time ranges, as shown in her comment

“pues podría ser (.) no dar como rangos (.) solo decir o sea tienes que hablar más de 20 segundos” [original version]

“it could be (.) not to give as ranges (.) just to say that you have to speak for more than 20 seconds”. [English version]

[Final Interview, Sharon]

Finally, when asked about the discussion forums, she says that it is a tool that she would use in her future classes, she states that she is

“estoy segura que sí la voy a usar en el futuro (.)ya sea para incluirlo en clases que sean presenciales o las que sean tareas o si son en línea sí me parece muy buena herramienta” [original version]

“sure that I will use it in the future (.)either to include it in classes that are face-to-face or homework classes or if they are online, I think it is a very good tool”. [English version]

[Final Interview, Sharon]

Sharon shows a lower score on the post-test overall but remaining the same in lexical resource.

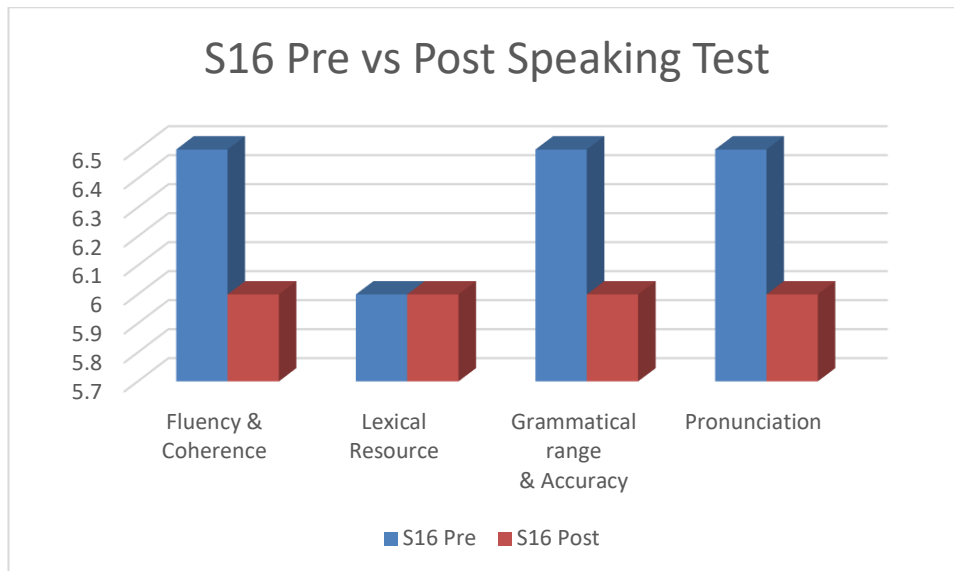


Figure 18. Sharon Pre vs Post Speaking Test Scores

5.1.5 Gerardo

The next participant is Gerardo, a participant who reported having little motivation and contact with English during his childhood and began practising it in his early teens. He explains that when he started to study his degree in ELT he noticed he needed to improve. Gerardo evidences this in his statements.

5.1.5.1 Previous Contact with English

The third participant, S25, hereinafter referred to as Gerardo, indicated a limited contact with English before starting the BA in ELT, this is evidenced by his following comments when asked about his English speaking skills:

“I had practiced it since I was 14 but at that age I did not demonstrate much interest but I remember that I did not struggle a lot with speaking part.”

“At the beginning of this career, I was 23, and I noticed that I lacked in every English skill, I noticed it because I saw the level of my partners so I decided to pay attention in class and study English when I have free time. Now I am better than my two years ago self; but, I still have to practice more.”

[Course reflection, Gerardo]

5.1.5.2 Self-perceived Personality

Gerardo perceives himself as being neither quiet nor extroverted, he refers being either shy or extroverted depending on the context. This is important for an educational setting because it

means that he has a good self-perceived image, he can adapt and, if the context is appropriate, the willingness of Gerardo to participate might be increased if he feels he is in a safe environment considering that extroverted people participate more.

“yo soy una persona que engloba de todo no? puedo ser tanto una persona tímida como una persona muy extrovertida todo encaja conmigo” [original version]

“I’m an all-rounder, right? I can be both a shy person and a very outgoing person, it all fits me”

[English version]

[Final Interview, Gerardo]

5.1.5.3 Perceived Linguistic Improvement

In terms of linguistic development, discussion forums represented an opportunity for Gerardo to develop what he considered his weak skill. This aligns with the intention of the voice AoDs, which is to provide a space for participants to develop their spoken performance. Gerardo claims that he recognizes this opportunity by saying

“quería mejorar pues lo que es la pronunciación mi fluidez también quería mucho mejorarlo no? y cuando nos presenta el proyecto yo dije pues me puede servir de algo si puedes salir algo bien al final de todo esto” [original version]

“I wanted to improve my pronunciation and my fluency, I also wanted to improve it a lot, right? and when you presented the project to us, I said, well, it could be useful to me, something good could come out of all of this” [English version]

[Final Interview, Gerardo.]

The idea of providing a space where participants can focus on developing spoken production, particularly those who did not have an opportunity to develop it in their early years, seems to have found acceptance. This is addressed by Gerardo when mentioning:

“yo estoy muy enfocado en el habla porque es lo que yo considero que me esta fallando mucho” [original version]

“I am very focused on speaking because that is where I consider I am failing a lot” [English version]

[Final Interview, Gerardo]

Moreover, Gerardo specifically explains that he does not have many opportunities to practice his English anywhere. This is of value to this study as the purpose of AoDs in the form of discussion forums is precisely that, to provide an opportunity to those who have not had it before. He supports this idea by stating that

“siempre he estado buscando siempre con quien conversar porque el único momento donde practico inglés en la escuela” [original version]

“I have always been looking for someone to converse with because the only time I practice English at school is when I'm at school” [English version]

[Final Interview, Gerardo]

He further argues that he had nowhere to interact, particularly in a context when they did not have a place where to gather to practice their English. This happened because the building where the Self-Access Center was located, a place regularly used by them for such purpose was demolished and a new one was being built. When asked where he usually practiced his speaking skills, he mentioned that

“aquí en la escuela pues ahorita como no tenemos el caale no tenemos esa oportunidad de de interactuar no? más que en el salón de clases y si acaso” [original version]

“here at school, since we don't have the Self-Access Center right now, we don't have that opportunity to interact right? except in the classroom, if any” [English version]

[Final Interview, Gerardo]

When asked specifically whether he felt there was any improvement in his speaking skills as a result of participating in this project, he answered:

“gramática porque a fuerzas teníamos que usar pues los puntos gramaticales que vimos en clase no? para subir las cosas en el foro” [Original version]

“grammar because we had to use the grammar points we saw in class, right? to upload things in the forum” [English version]

and also answered that in:

“vocabulario porque por ejemplo habían ocasiones en que no sé cómo se dice esta palabra voy a buscar portal palabra y ya localizaba me aprendía cómo se pronunciaba y pues la agregue a mí diccionario” [Original version]

“vocabulary because for example there were times when I didn't know how to say this word, I went to look up the word portal and I learned how to pronounce it and then I added it to my dictionary.” [English version]

[Final Interview, Gerardo]

5.1.5.4 Rehearsal

Another aspect that appears to have had an impact on participants speaking skill is rehearsal, understood as the number of times they practiced before uploading their main contributions to the discussion forums or the number of times they could do their contributions, analyse them and decide whether to upload them or edit them, which is consistent with literature Dugartsyrenova and Sardegna (2017), and Ellis (2005). For this particular participant, when asked whether the project had helped him to learn anything, Gerardo mentions that more than learning, it was practicing that helped, he elaborates on this by saying:

“sí me ayudó bastante porque por ejemplo- por ejemplo el comienzo pues sí estaba un poquito perdido tarda mucho en hacer las actividades afortunadamente pues teníamos tiempo para subirlas no?” [original version]

“Yes, it helped me a lot because for example - for example, at the beginning I was a little bit lost - it takes a lot of time to do the activities, fortunately we had time to upload them, right?” [English version]

He further indicates that having the time to edit and improve his contributions before posting them allowed him to improve over time, since there were several forums, the rehearsal that he had available made it easier for him to contribute.

“conformidad pasando el tiempo se me fue más fácil incluso hubo en un foro en el que ah tengo que subir un foro y fue que entré ví las especificaciones lo hice en unos minutos es más incluso lo había hecho bien pero dije Ah pues puedo mejorar un poquito esta parte así que lo voy a volver a grabar y pues lo volví a hacer lo subí todo pues y pues sí como que sí ha habido una mejoría” [original version]

“As time went by, it became easier for me, there was even a forum in which I had to upload a forum and I went in and saw the specifications, I did it in a few minutes, I had even done it well, but I said Ah well, I can improve this part a little bit, so I'm going to re-record it and I did it again, I uploaded everything and yes, it seems that there has been an improvement” [English version]

[Final Interview, Gerardo]

The comment above yields the possibility that, although there is no significant improvement in the pre and post-tests, it can be observed that the time Gerardo needed to prepare his contributions was reduced through rehearsal. By having enough time to plan his participations, he was able to look for ways to improve other aspects such as pronouncing better and reading faster. He shows this by stating that:

“he buscado actividades de cómo poder por ejemplo cómo pronunciar mejor las palabras cómo Leer más rápido cómo puedes comunicarme con la gente ósea el foro me ayudó pero pues también con

cuestiones otras cuestiones también me ayudaron pues pero por el hecho de hacer foro bien pues”

[original version]

“I have looked for activities on how to, for example, pronounce words better, how to read faster, how to communicate with people, namely, the forum helped me, but also with other issues that also helped me, but for the fact that I wanted to do the forum well” [English version]

[Final Interview, Gerardo]

5.1.1.5.5 Motivation

As can be inferred from the abovementioned comments, Gerardo started to show interest for improving, one might argue that motivation increased and anxiety is reduced by having this extra time to prepare until he felt his work was good from his perspective. In addition, for Gerardo, motivation appears to be fostered by the personalization of forums tasks as he implies in his comment:

“At the beginning I felt embarrassed because we do not normally practice these activities; but by the pass of time, these activities became like a habit, I lost the anxiety to these types of activities, even with these activities I met with myself because most of them were related to things that I like and dislike, and I was able to share with my partners”

[Course reflection, Gerardo]

He also mentions that personalization made tasks easier to do. When questioned about the difficulty of the forums, he replied:

“la información que teníamos quedar en los foros eran cosas nuestras pues casi siempre se trataban de gustos por lo tanto era más fácil” [original version]

“the information we had to give in the forums was our own stuff because it was almost always about likes and dislikes so it was easier” [English version]

[Final Interview, Gerardo]

Furthermore, Gerardo adds that personalization increased his interest on the topics because they also made him reflect about himself. This is shown in the following two comments:

“que las actividades pueden ser muy interesantes (.) es que por ejemplo usábamos muchos temas que eran de nuestro interés pues (.) si no era como que lee esta historia y comentanos usando tal cosa” [original version]

“that the activities can be very interesting (.) for example, we used many topics that were of interest to us (.) otherwise, it was like read this story and comment using such and such a thing”

[English version]

“lo interesante ahí pues fue como quien dice que te ayuda también a conocerte a ti mismo” [original version]

"the interesting thing about it was that it also helps you to get to know yourself" [English version]

[Final Interview, Gerardo]

Gerardo was aware that he needed to improve and that he needed to do something to become better, the discussion forums through audio gave him a tool to actually analyse how he was advancing which in turn boosted his confidence. He states that AoDs helped him to increase self-confidence, this is shown in his remarks:

“sí me ayudó un poco más con la seguridad no, aparte de otras actividades que estaba haciendo porque es un tema que yo siempre estaba trabajando pues sí estoy muy consciente que ocupó mejorarlo y siempre he buscado ayudas tanto aquí de maestros como psicólogos para poder mejorar eso sí y si esas actividades pues como son de producción si me sentí al final más cómodo o sean realizarlo incluso escuchaba- y me sentía muy cómodo porque yo sabía que mis compañeros me escuchaban porque me respondían” [Original version]

“it did help me a little more with self-confidence, apart from other activities I was doing because it is an issue that I was always working on, I am very aware that I needed to improve it and I have always looked for help from teachers and psychologists to be able to improve it, and those activities, since they are production activities, I felt more comfortable at the end, or I even listened to it and I felt very comfortable because I knew that my colleagues were listening to me because they answered me.” [English version]

[Final Interview, Gerardo]

This last comment shows how a good design, where all participants of a forum have to interact at least with another participant can have very positive effects for those who feel are struggling to improve their speaking skills or with self-confidence.

5.1.5.6 Strategies for Forums

Audios

As for Gerardo, in the case of audios, rehearsal allowed him to gradually reduce the amount of planning he had to do for posting his participations and to slowly allow for more fluent or spontaneous speech, this can be observed on his two following comments:

“el de audio pues sí siempre a los en los primeros foros lo que hacía era practicar no? lo escribía y lo practicaba y veía cómo pronunciaba me grababa no me gustaba cómo sonaba lo practicaba otra vez eventualmente pues fui mejorando en eso casi siempre lo que hacía era escribirlo practicar o hay

veces que solo eso principio no? ya más adelante lo escribía pero sólo escribía unas palabras claves [R: oh okaay] sí y ya me grababa y decía la palabra clave pero luego le agregaba el contenido que venía que se me venía ocurriendo mientras estaba hablando eso era en cuestión de en los que son de audio.” [Original version]

“the audio one yes, in the first forums what I always did was to practice it, right? I would write it down and practice it, and see how I pronounced it, I would record myself, I did not like how it sounded, I would practice it again and eventually I got better at it. And almost always what I did was to write it and practice it or there were times when I just did that at the beginning, right? later on, I would write it down but I would just write some key words [R: oh okaay] yes and then I would record myself and say the key word but then I would add the content that came to my mind while I was speaking, that was in the audio ones.” [English version]

“tenía una idea de lo que puedo decir y no más le agregaba los puntos gramaticales que teníamos que meter y pues salía solo” [original version]

“I had an idea of what I could say and I just added the grammatical points that we had to put in and it came out by itself” [English version]

[Final Interview, Gerardo]

This indicates that the extra time for planning, researching, practicing and editing before posting, mentioned in the literature (see 2.4.5) did have a positive impact on the way Gerardo articulated the sentences in his head so that later he could put them into utterances. This practice also made him become more self-aware of how he sounded and how he wanted to sound to others. He also adds that all this practice or rehearsal had positive results at the end, particularly regarding self-confidence as stated above. When asked if he felt more confident in his audio productions at the end of the course than at the beginning, he answered:

“sí, hacía notas -y fíjate que hacía notas por el hecho de que- de no querer hacer como- de que no querer ¿abandonar esas viejas prácticas no? tampoco quise hacerlo, no quise ser tan soberbio así de que yo tengo todo lo necesario como para no escribir nada y solo producirlo” [Original version]

"yes, I made notes - and it's worth mentioning that I made notes because of the fact that - that I didn't want to do like - that I didn't want to abandon those old practices, right? I didn't want to do it either, I didn't want to be so arrogant like I have everything I need so as to not write anything and just produce it" [English Version]

[Final Interview, Gerardo]

From his comments it is noticeable that the fact that he was able to write his participations before actually posting, made him feel more confident, and thus, he was more willing or eager to participate in class which, inferring from his comments is not something that probably would have happened in an synchronous conversation. He elaborates on why he prepared his contributions by stating that

“sí pues el simple hecho de que no quería pasar como la vergüenza de que hoy qué mal esa palabra o algo por el estilo pues buscaba a veces que si me metía un diccionario virtual cómo se dice y cómo se dice varias constantemente estuve haciendo eso con varias palabras porque sentía necesidad de tener que hacerlo (.) incluso para con palabras que ya conocía igual por no más por afirmar que si es así como se pronuncia” [Original version]

“yes, the simple fact that I didn't want to be ashamed, that listen that word is wrong, or something like that, because sometimes I would look up in a virtual dictionary and how do you say it and how do you say it did that several times, I was constantly doing that with several words because I felt the need to do it (.) even with words that I already knew, just to affirm that it is like that how it is pronounced.” [English version]

[Final Interview, Gerardo.]

Videos

As for videos, it seems that because there was only one video activity, or because the fact that there is a recording of the person, he became more self-aware and wanted to look good, he planned everything beforehand with more attention to memorizing everything instead of writing it down and reading it, as shown in his statement

“en el vídeo pues ahí sí tenía que pues primero acomodar todo en mi mente todo el contexto que está a mi alrededor y pues ahí sí como quien dice me aprendí a lo que iba a decir” [Original version]

“in the video, I had to first of all put everything in my mind, all the context around me and then, I would say, I memorized what I was going to say” [English version]

[Final Interview, Gerardo]

It seems that the more personalized, or the more topics related to the participants, in this case to Gerardo, the easier it became to be more spontaneous in speech or the easier it was to finish the tasks, as in the discussion forum through video (see Appendix F) where Gerardo explains that he:

“ya tenía establecido un lugar donde quería ir en las vacaciones y qué lugares quería visitar por lo tanto no- si escribí más o menos puntos pero no- no tanto y no me tomó mucho practicarlo pues lo practique nada más una que otra ocasión” [Original version]

“already had a place where I wanted to go on vacation and what places I wanted to visit, so I did write more or less points, but not so much, and it didn't take me much practice because I only practiced it once or twice” [English version]

[Final Interview, Gerardo]

5.1.5.7 **Schedule for Posting**

Another aspect that Gerardo defined as important was the time frame assigned for participants to prepare and contribute in the forums, the usually had until the end of the week to finish their contributions, forums were scheduled to close on Sunday at midnight with the purpose of giving all those who worked, or who had other responsibilities, enough time to prepare and participate with their contributions. Gerardo explains that this fixed schedule was beneficial for him by stating

“me gustó que, por ejemplo, ya estaba un horario establecido va a ser de tal día a tal día, y siempre era repetidamente durante todo el ciclo de tal día a tal día, viernes a domingo, viernes a domingo y ya podía yo administrarme de que no pues llegando a la escuela voy a hacer el foro” [Original version]

“I liked that, for example, there was already an established schedule that would be from this day to that day, and it was always repeated throughout the semester from this day to that day, Friday to Sunday, Friday to Sunday and I could manage my time, in the sense that, well, once I get to school I am going to do the forum” [Original version]

[Final Interview, Gerardo]

5.1.5.8 **External Factors**

Consistent with literature with AoDs, an issue that made contributing to the forums difficult were factors external to their own skills in their personal setting. Factors over which Gerardo did not have control and that extended the time needed to complete the tasks, he elaborates on this idea by saying that:

“tardé en subirlo eran interacciones externas era que el perro empezó a ladrar ((risas)) o cosas así no? o que alguien gritó abajo era por eso que también tarde poquito en subir esa actividad” [Original version]

“It took me a while to upload it, it was external interactions like the dog started barking ((laughs)) or things like that, or someone yelled downstairs, that's why it also took me a little while to upload that activity” [English version]

[Final Interview, Gerardo]

5.1.5.9 Future Teaching Reflection

Gerardo found forums to have value for his future in a couple of aspects, he said that including grammar points to activities that students like can be useful for his own teaching. When asked what he had learned from this project and what he would take from it, he stated that

“me llevo mucho las tareas que hacíamos en los foros porque puede ser muy útil para el futuro de nuestra enseñanza pues esas actividades utilizadas con los puntos gramaticales adaptadas a un tema que a los alumnos les interesaba” [Original version]

"I'm taking with me a lot of the tasks we did in the forums because it can be very useful for the future of our teaching, those activities used with grammatical points adapted to a topic that the students were interested in." [English version]

[Final Interview, Gerardo]

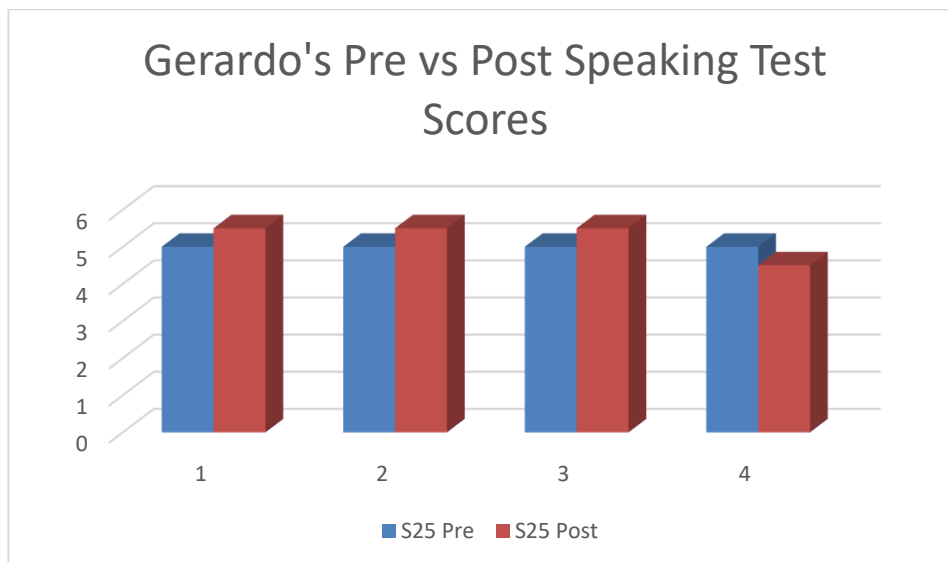
The other aspect is the way in which forum topics were chosen, the class was given the grammar topic to be studied, then divided in small groups, each group presented their option to what they thought the next forum topic should be and what activities to implement, then the class voted on the best topic for that particular grammar point and the one receiving more votes was the one used. Gerardo found this to be useful and mentions that he will integrate that into his teaching repertoire in the future. This is shown in his remarks:

“siempre votábamos no? porque les interesaba más y el ganador pues siempre se utilizaba y eso está muy bueno para nuestros próximos alumnos por el simple hecho de que ellos se conozcan ellos se conozcan consigo mismos y conozcan a los demás” [Original version]

"We always voted, right? because they were more interested and the winner, well, was always used and that's very good for our next students, just because they get to know themselves and know others." [English version]

[Final Interview, Gerardo]

For Gerardo, there seems to be an improvement from the pre-test to the post-test except in pronunciation, this is noteworthy since pronunciation is one of the aspects that the participant reports as having practiced the most and where he felt he improved. See graph below for comparison between pre and post test scores.



Chapter four discussed how mean scores between the pre and the post-speaking tests showed very little difference between the participants. It also discussed the specific case of five participants whose particular situation was of interest because of their contact with English at an early age, their self-perceived personality and speaking skill.

5.2 Key Findings

This chapter highlights the importance of analysing individual differences in participants as although as a whole group, positive effects are not as evident, when analysed in detail relevant information emerges.

The biggest gains between pre and post scores appeared in the participants who identified themselves as being shy, Juan (0.3 points) and Gerardo (0.1 points). Catalina and Sharon who identified themselves as extroverts actually reduced their scores from the pre to the post test. Information on Jazmin was particular because although she identified as introverted, she reported having had contact with English in her childhood and if data were consistent, it would present her as improving, she stated that she did not want to become an English teacher and thus the lack of improvement appears to be more a situation of motivation. Both Juan and Gerardo showed improvement in the same speaking features, fluency & coherence, lexical resource and grammatical range and accuracy while not improving in pronunciation.

The data suggests that these gains for shy learners may be due to the possibility to reflect and process their thoughts and ideas before sharing them in the forum, which would include rehearsal. On the other hand, in the case of extroverted learners, especially if they have a high speaking skill, the tasks might have seemed very easy to do, and thus, no real reflection or

planning was needed to do them which could render them as being unchallenging and provoking a decrease in motivation. The difference in the post test conditions, and the additional assignments they had at the end of the course might have influenced the prioritization the extroverted learners gave to the post test, hence, taking it mostly to comply rather than to challenge themselves.

Four of the five participants show positive comments on the topics used, Juan stating that this had a specific effect on engagement, and that he spent more than the intended time in doing the activities because the topics made him become engaged. In this sense, it is possible that forums were more motivating for extroverts due to the topics and the test less motivating due to the same reason.

In terms of perceived gains, Catalina, Sharon, and Gerardo mentioned fluency as being a benefit for them although test scores only showed Gerardo improving. This could be an indication that there is a perceived improvement but it is not really occurring or that test conditions affected their performance and thus were not able to demonstrate their gains. Catalina highlighted the importance of using images to facilitate ideas when speaking. Gerardo and Catalina report feeling improvement in grammar with only Gerardo showing it in test scores. Jazmin and Gerardo stated perceiving an improvement in pronunciation though their scores did not support the claim. Juan is the only one who reported not feeling he had improved but actually showing test scores with improvement in all aspects except pronunciation.

Four of the five participants mentioned as positive the fact that their likes were integrated into the design of the collaborative forums, stating that it was easier to do the tasks when the topics were of interest to them. And those same four stating that they felt an improved sense of community within the group, the only exception was Jazmin which appears to be related to her motivation to becoming an English teacher.

Motivation plays a key role as evidenced by the reflections presented by four of the five pre-service teachers. Catalina stated that she would use discussion forums in her teaching practice focusing on fun and personalised topics, Juan mentioned that he would use them and that teachers have to consider the needs of students too, Sharon commented on the value of not only doing but also designing the forums as this prepares her for becoming a teacher and that she did not expect feedback to be as important as it was. Finally, Gerardo adds that all the tasks would be useful for his future as a teacher and the grammatical points adapted to the topics that at the same time were used to get to know others is something he takes with him.

Chapter 6 Discussion

This research study explored the effect that collaborating with pre-service teachers to design voice-based asynchronous online tasks for discussion forums had on their spoken production and on their perception of how the teaching and learning of spoken production in a foreign language occurs. The use of voice-based asynchronous online discussions is an effective tool for developing features of spoken production but it is not to be overused, instead it requires structure and clear objectives to be able to reap its benefits.

The following chapter will discuss the lessons learned through this project by attempting to answer each of the research questions presented at the outset of this thesis. After a brief summary of the most relevant literature for this research project, each research question will be restated and the implications for either theory or practice will be discussed.

According to literature the benefits of working with voice discussion forums are enthusiasm, great peer to peer interaction, and that it is a viable option to enhance listening and speaking skills.

There is a strong potential for the reduction of anxiety because it eliminates the immediate responses needed by face-to-face classes and it gives students the opportunity to prepare their contributions. Increased risk-taking, in terms of the quantity and quality of the output produced and reduced fear of negative evaluation. ACMC oral practices can be beneficial in developing speaking aspects in lower-proficiency language learners (there is no research on the effect over post-beginner and higher proficiency learners). It can potentially promote linguistic development. Learners perceive voice discussion forums as “beneficial for raising self-awareness, self-correction patterns and for enhancing pronunciation, intonation, fluency and accuracy”. They improve pragmatic competence. Tasks that involve “reasoning demand” increase accuracy scores, but “dual-task demand” do not. Learners perceive oral proficiency development through the provision of additional time and resources for independent planning, rehearsal, and controlled production of L2 forms McIntosh et al. (2003), Poza (2011), Nicolas-Pino (2013), Wilches (2014), Eslami, Mirzaei and Dini (2015), Fukuta and Yamashita (2015), Dugartsyrenova and Sardegna (2017).

Additionally, there are studies that further explore benefits of voice-based discussion forums. For instance, according to Pellettieri (2010) studies show that Synchronous CMC “facilitates the acquisition of oral competence.” Bakar et al., (2013) mention that “the online mode of learning offers educational flexibility since it is independent of time and location (Bernard & Lundgren-Cayrol, 2001; Hew & Cheung, 2003)”. They also posit that the “online discussion forum not only motivates learners to speak, but also encourages those who are shy and withdrawn to be more courageous and willing to participate”, adding that the “online discussion provides them -

students- with a non-threatening environment that reduces their anxiety and concerns about being embarrassed if they were to speak face-to-face in front of the public”. Moreover, they mention that AoD “provides extra time for the learners to reflect, think and search for additional information before contributing to the discussion (De Wever, Schellens, Valcke & Van Keer, 2006; Pena-Shaff & Nicholls, 2004). Besides, all exchanges of information between learners are also stored for future reference (De Wever, Van Keer, Schellens & Valcke, 2007).”

McIntosh et al., (2003) state 2 major benefits of ACMC: 1) deeper thought process and 2) facilitation of collaborative learning. Abrams, 2003; Wang & Woo, 2007; Yaneske & Oates, (2010) cited in Wilches (2014), explain that the voice forum “enables students to take their time to elaborate ideas and edit as many times as necessary before posting”. Also mentioning the “raising of self-awareness and self-correction of speech patterns, the extra practice of language features such as pronunciation, fluency, intonation and accuracy as beneficial for spoken production”. She elucidates that asynchronous voice activities create an anxiety free atmosphere where learners can take more time to try to include grammatical and lexical items studied in class into their voice posts. Abrams, (2003) and Blake, (2009) report that “increased attention to grammar structures, use of lexicon and students’ construction of ideas can be achieved through CMC tools”.

Literature reports negative aspects such as disappointment when no one replied to students posts and some reported embarrassment from posting their voice recordings. Other problems reported are timing of posting, technical difficulties, unfamiliarity with the medium and improper set-up of hardware. Two studies reported asynchronous groups not outperforming synchronous McIntosh et al. (2003), and Abrams (2003). Moreover, Claro, (2008), states that “ACMC discussion appears to have an overall negative effect on oral production of the L2” as she compares it against synchronous and face-to-face discussion. However, she states that “it seems that fluency is best enabled by SCMC and accuracy by ACMC”.

Yaneske and Oates (2010), explain that “learners may have problems accessing a platform, or meeting the technical requirements to run a program, as well as recording, editing, interacting with the tool, or personalizing the interface”. She further remarks that these issues may hinder learner participation in asynchronous forums and tasks and might give rise to affective problems such as “drop in motivation, embarrassment or lack of interest”.

Wilches (2014) posits that a challenge for instructors when using ACMC tools for communicative tasks are the time it takes to provide individual feedback, particularly in large groups. She elaborates that learners have more time to edit before posting but that “flexibility may delay conversations and feedback”, which in turn “may cause students to lose the motivation to participate”.

All these aspects are considered in this text and some are consistent with the data analysed. Other aspects that appeared in this analysis were the effect of learner background on their experience with forums, the design of the discussion forums including the effect of using easy tasks and the consideration of using Col in the design, collaborative pedagogy and sense of community for which literature conjectures but does not present empirical evidence Woods & Ebersole, (2003) and Rovai, (2007).

6.1.1 The Impact of the Use of Asynchronous Voice-Based Discussion Forums in the Language Classroom

This section discusses findings related to Research Question number one (see 1.3.1). The first aspect to be discussed will be the impact of AoD in the development of spoken language competence of the English Language Teaching pre-service teachers.

As part of the current design of this project, the forums being part of a broader class experience it is difficult to claim that changes may be due only to the AoD forums. Hence, isolating which variables in the class might affect their spoken performance is complicated. However, considering that the learners have already taken three English courses prior to the one part of this study, and that the design of the class (see 3.4) did not have another time allocated for developing spoken production but rather other skills, it is possible to obtain limited qualitative data in the form of learner perception. The latter could indicate the effect of the forums since they were purposely intended to improve spoken production and the qualitative data shows a perceived benefit in terms of spoken production as well as a very small improvement through the pre and post-tests.

This research findings do not show significant difference between pre-test and post-test scores but participants do perceive an improvement. This could indicate that the instruments used for measuring were not adequate, that the test conditions were not optimal or that there was no actual improvement. For the case of low proficiency students, however, there is an improvement and this coincides with the study of Buckingham & Alpaslan, (2017) who contend that “children in the experimental group whose level was initially assessed as weak improved their speaking scores” which would suggest that gains may come from lower proficiency students.

Pre- and post-tests do not show a significant increase from learners scores. Nevertheless, the time that learners spent planning a voice contribution differed, in some cases greatly, from the beginning to the end of this project. The current design of the project did not allow to measure such times, this represents a limitation that needs to be researched as it represents an important increase in the capacity to put thoughts into words on the part of the learners. The asynchronous

nature of the discussions does not allow to observe such changes, but a combination of SCMC and APMC might permit to observe such changes.

In a text based study, Lin, (2014) found CMC in SLA was not able to conclusively support its benefits. He implied that low proficiency learners performed better suggesting that APMC has the “potential to remedy some learners’ shortcomings, such as their low language proficiency”. He mentioned that his small sample made results tentative (see 2.4.2). This seems to be the case in this research since learners with a lower proficiency level appear to have increased their scores slightly. There is a possibility then that some findings from text based AoD may transfer into voice-based AoD although more studies are needed to confirm this.

Another text-based CMC study, Hamann et al., (2011), argued that “the effectiveness of online discussions can be conditioned—even compromised—by such factors as group size, gender composition, and differences in the prior academic achievement of participants”. They added that literature reports smaller groups (about 5 participants) fostering more and less repetitive interaction while increasing higher-order critical thinking and that students with lower academic achievement who are more inclined to passive learning make the largest gains compared to higher GPA cohorts.

For this particular research, the type of interaction required was to listen (or read in the first forum) to the contributions of their classmates and reply to the post depending on the topic. How genuine the interaction was is debatable since it was part of a task that learners had to complete, but the idea was that, since their contributions were related to their likes and preferences, it would create an interest to know about their peers. Encouraging a greater degree of interaction in the future is desirable, and learners being familiar with these types of activities is key in order to achieve it. Topics that are of their interest and controversial should be used in order to generate more genuine interaction.

The above was a limitation for my research since all my forums were conducted with the whole group, yet, when the replies to others post were limited, the pre-service teachers reported they were able to comply better with their work. The factors mentioned above need to be studied further in voice-based AoD, particularly the effect of group size. This view is supported by Fehrman & Watson, (2020) who also explored group size, and states that group size is not a “widely studied aspect of AODs” and that literature to date is not conclusive.

Elder and O’Loughlin, (2003: 216) explored age, in their IELTS report, as a variable stating that “it did not appear to have a linear relationship with score gains” adding that “both younger and older students performed more poorly than the 20-25 year olds” which they mention as the optimum age. The same authors contend that those “who made the greatest gains were students at lower

levels of proficiency as measured by their Time 1 IELTS score”. Further studies are needed to understand if age can be a factor when using AoD forums.

Administering tests at the end of the course when university students have many assignments from different subjects and thus very little time to do them might have impacted results of the post-test. Administering it in a more controlled environment and in a setting with fewer academic commitments, as it was done at the beginning of the project, might show different results. However, test results show limited gains of students with lower proficiency.

S15, or Juan, who used to record himself synchronously, verbally stating that he created videos for social media, did not perceive improvement after this asynchronous intervention, his comments contrast with the pre and post-test scores which do not show an improvement pronunciation but they do in fluency and coherence, grammar and vocabulary (see 5.1.3.3). This could indicate that recording synchronous and asynchronous videos have different effects.

78% of the participants reported perceiving an improvement in speaking. Although there is no significant improvement in the pre and post-tests, a benefit observed from qualitative data was the time needed to prepare their contributions, 56% mentioned having reduced the time it took them to contribute over time from the beginning to the end of the course. Gerardo (S25) specifically stated that the amount of times he recorded his audios before posting was also reduced. This indicates that asynchronous voice forums can foster fluency and self-confidence in speaking. Their contributions were analysed as part of the regular course but were fairly consistent, however, due to the amount of audio and video data that appeared, feedback was delayed. This is also consistent with literature Vonderwell, (2003), Gass, (2010), Hew & Cheung, (2012).

The pre-service teachers perceived a benefit in accuracy by integrating new structures into active speech and by improving their existing grammar use arising from voice discussion forums, evidenced in the group findings, see 4.2.2.2, 4.2.3.1, as well as in the individual findings, see 5.1.1.3, 5.1.3.3, and 5.1.5.3. These results echo the views of the studies by Abrams, (2003) and Blake, (2009).

It appears that shy students improve in the same speaking features, fluency & coherence, lexical resource and grammatical range and accuracy while not improving in pronunciation as was the case with both Juan, Gerardo S10 and S36 though the latter did improve in pronunciation. More studies focusing on specific features of speaking correlating with perceived (or measured) shyness or introversion are needed to understand this relationship. This adds to the findings of Qiyun & Huay, (2007: 282) who indicates that “it seems that asynchronous online discussions are more

appropriate for group characteristics that consist of a mix of introversion and extroversion” but equal opportunities must be available for all to participate.

This section discusses findings related to Research Question number one, on its second section (see 1.3.1). The aspect to be discussed will be the impact of AoD on the individual affective factors that might impact the development of spoken language competence of the English Language Teaching pre-service teachers.

58% of the participants stated that they felt a sense of community owed to the discussion forums as they got to know their classmates better. Catalina mentioned that getting to know her classmates would make her feel better in the classroom. This sense of community might imply lower affective filters or higher levels of willingness to communicate (WTC) in classes. This could impact other areas such as self-perception and self-confidence.

Twenty-seven pre-service teachers out of the thirty-six reported to have felt anxiety and least once during this research. This contrasts with a voice-based AoD study by Pop et al., (2011) compared the effect on motivation of two different approaches to discussion, one in F2F classes and the other asynchronously and found that features of students’ “personalities, learning and response pace, motivation, and language proficiency that lead to individual inequality to speak up in class or in groups were bypassed in the digital environment”. claiming that anxiety of speaking was significantly reduced. However, comments for feeling anxious indicate more an individual personality trait rather than the asynchronous nature (see 4.2.4.2). More research comparing initial anxiety feelings against feelings in the last forums would be needed although the following literature makes the case of reduced anxiety from these forums Poza, (2011), Wilches, (2014), Bakar et al., (2013), and Pop et al., (2011).

This view is consistent with Buckingham & Alpaslan, (2017) who state that “Progress in learners’ WTC appeared to be a gradual phenomenon and significant changes in the WTC variables analysed in this study were only detectable from beginning to end and not on a monthly basis” and with Gleason & Suvorov, (2012) who mention that asynchronous computer-mediated communication is “less face-threatening, allows students to learn at their own pace, and enables self-reflection”. Furthermore, they state that “these advantages may lead to the development of learners’ speaking confidence”. And who, consequently “may also sharpen their future vision of themselves as competent target language users”, this last comment would increase their WTC.

As a result of recording and listening to their own voices, participants seem to have been very self-aware because of how they would “sound” before their classmates indicating that they are judging their own pronunciation, intonation and/or fluency among other aspects of speaking. This led them to listen to themselves several times until they considered their work was “good”

enough to post it in the discussion forum. This matches the perceptions of Wilches, (2014) who elucidates that in “voice-based tasks outside class, students have more time to check the phonetic transcription of difficult words, practice repeating a particular sound several times before posting, and especially, listen to themselves”. She mentions the “raising of self-awareness and self-correction of speech patterns”, as well as considering the “extra practice of language features such as pronunciation, fluency, intonation, and accuracy as beneficial for spoken production.

The above is exemplified in a comment by Gerardo: “As time went by, it became easier for me, there was even a forum in which I had to upload a forum and I went in and saw the specifications, I did it in a few minutes, I had even done it well, but I said Ah well, I can improve this part a little bit, so I'm going to re-record it and I did it again, I uploaded everything and yes, it seems that there has been an improvement" [English version]

[Final Interview, Gerardo]

AoD forums also appear to enhance self-awareness of different linguistic aspects in learners. While some might notice that any given aspect of their speaking has improved, some others may notice their vocabulary, grammar, pragmatic or sociolinguistic use among others. Key findings (see 5.2) in Chapter 5 concur with this when showing that three participants perceived fluency as an improvement, two reported grammar, and two more pronunciation as a perceived gain.

When watching themselves on video participants reflected on how they had felt about having to consider their body language, frustration, nervousness leading again to a heightened self-awareness and self-correction until they felt they had produced a good video. Mandatory video contributions for asynchronous voice discussion forums is not recommended as 58% of the participants reported negative feelings towards using video; it can be left as an option for those who enjoy creating content. Conversely, 39% explicitly stated liking having the choice, not only for video but for and text, audio. This echoes the views of Schultz, Bethany; Sandidge, (2022)

As a group, they stated being aware of their mistakes and feeling more self-confident when they were able to interact with someone they had not interacted before.

6.1.2 What Techniques and Strategies Do L2 Learners Use When Completing Tasks in Asynchronous Voice-Based Discussion Forums?

This section discusses findings related to Research Question number two (see 1.3.1). Consistent with that expressed by Dugartsyrenova and Sardegna (2017), and Ellis (2005), participants perceived rehearsal as beneficial for structuring their ideas and later be able to put them into words when speaking which meant that their fluency also improved, this occurred progressively

from the beginning of the project to the end. 14 students reported using rehearsal as a common strategy for preparing their contributions. Unfortunately, due to this project design, obtaining indication of participants learning from each other before posting was limited, except for the case of Juan (see 5.1.3.4) who explained that he would use what others wrote as an example of what to do.

Consistent with literature (see section 2.4.5), participants used the asynchronous nature of the forums, and the additional time this provided to prepare their contributions before posting them. Twenty participants (56%) mentioned that there was an improvement in the amount of time spent preparing their contributions, they spent more time on the first forums and less on the last ones. It seems that cognitive load lightens after repeated syntax practice and appears to benefit a faster thought process.

Another strategy used by participants was to research first what they wanted to say, and then record and listen to their audios to finally post their contributions. Gerardo shares that having the time to edit and improve his contributions before posting them allowed him to improve over time, since there were several forums, the rehearsal that he had available made it easier for him to contribute. This could indicate an increase in self-perception, confidence, and WTC.

6.1.3 What Aspects Need to be Taken into Account When Designing L2 Online Voice-Based Discussion Forums?

This section discusses findings related to Research Question number three (see 1.3.1). It discusses the pedagogical implications considering what we have learned, for designing AoD forums.

It is clear that both synchronous and asynchronous CMC have their shortcomings and advantages. Asynchronous can be more beneficial for any student who needs the extra time to understand and be able to apply any given skill or knowledge when starting to use them, and synchronous for those who do not need it. Using a combination of SCMC or F2F interaction and AoD can prove to be more beneficial than only using one mode. In this research data suggests that AoD were more beneficial for learners with a shy personality or with a low development in their spoken production.

Another interesting aspect is to consider the participants' background. In this study, participants were pre-service teachers who engaged in designing asynchronous discussion forums, a tool that could prove to be useful for them in the future. The fact that it is part of their professional development or future practice can help in deepening reflection and in generating interest as well as to find educational value for themselves as students, not only as future teachers. Thus, considering the learner's background can be a powerful tool to improve motivation or

engagement in the topic, this echoes the views of a text-based AoD by Woods & Ebersole, (2003), (see 2.4.3).

From the progression of the first forum (designed by researcher) to the fifth and last one (all the other forums designed collaboratively), once all the feedback had been integrated, the majority of participants considered instructions to be better as they made the tasks easier. Thus, having brief, clear and consistent instructions throughout the project appears to have helped participants feel more confident in what they had to do. Consistent instructions appear to reduce cognitive load as well allowing participants to focus on improving the L2 feature being practiced.

Designing tasks in a way that they are straightforward was found to be an aspect accepted by the majority of the participants, since in this way it is likely to be easier for them to integrate the grammar points, or any linguistic feature requested as they will already have the idea of what they want to say, they just need to reorganize information to meet the task requirements. This is consistent with the 2015 study by Fukuta and Yamashita where they state that “reasoning demand increased accuracy scores, but the dual-task demand did not”, in that same study they recommend that tasks be made easier so that learners can focus on syntactic forms. It is also consistent with the Limited Capacity Hypothesis and the Cognition Hypothesis which posit that simple tasks probably foster fluency and complex ones accuracy.

This is consistent with the opinions expressed by the participants of this study. This research study reinforces Fukuta and Yamashita’s recommendation of simplifying tasks for reducing learner cognitive load and thus, a greater integration of grammar points into existing active grammar use can be achieved. This research reaffirms the idea that tasks need to be simple and with brief with detailed instructions. The apparently simple activities that participants carried out for this research study are complex for cognition because it entails speaking in another language, using technology to create material (e.g. creating a video) and presenting their voice to others attempting to integrate the features of spoken production into their message, the extra time allowed by the asynchronous nature of these activities allows to overcome a trade-off between focusing either on meaning or form of the message as claimed by Robinson’s (1995) Cognition Hypothesis. More studies are needed to understand if high proficiency, low proficiency, extroverted or introverted students’ lean towards certain types of tasks.

The Community of Inquiry model should be considered when designing AoD forums, particularly Teacher Presence in the sense that there needs to be a teacher design, or collaborative, if possible. Seven participants explicitly stated importance of teacher presence in the AoD forums. S13 stated that the fact that the teacher/researcher clicked on the like button every so often indicated that he was there and that their posts were not just there in vain. Making participants

know that someone, and the teacher, is listening to their contributions helps in engaging them even if feedback is delayed as was the case in this research.

Moreover, voice contributions were analysed using the same IELTS rubric used for the pre and post tests and a sheet with the points awarded was sent to students as feedback. The “like” button’s function was to “show” learners that the instructor was overseeing their work, the later feedback’s intention was to help them improve or focus on particular skills and the required comments by other participants intended to keep the task interactive. The concept was for students to be able to integrate the grammar points studied in the class into their active spoken production through practice.

Another important factor to consider is offering learners choice, this research found that at the end of the forums, learners appreciated being given the choice of what mode to use even if they knew what they were going to do beforehand (see 5.1.2.5 and 6.1.1).

Another element to contemplate is that the tasks need to have a mark associated to them and that the participants need to be aware that the facilitator is actually reviewing their work but to do so with a rubric, and if possible, assign the forums as extra grades. There seems to be a greater effort for contributing if the contributions in the forums are mandatory as stated by Hew & Cheung, (2012: 50-61) but only to comply.

One more aspect to be considered is that having one due date for posting many would leave their contribution for the last minute and would lower the quality and quantity of the interaction between peers. Having two due dates, one for posting their main contribution and a second one for interacting could solve this problem and thus increase the quality of interactions. However, on the last forum evaluation sheet, eight participants explicitly mentioned they preferred having one single due date as having two was confusing for them because they were used to having only one due date from their previous experiences. If they start having two due dates earlier and more frequently, they could get used to it similar to they way they are used to having one due date because of previous experience.

Participants discuss a perceived benefit of interacting with other classmates who are not their friends, indicating that these social interactions with people they do not know may boost their self-esteem which is supported by McIntosh et al., (2003) Therefore, including in the instructions, a maximum of responses that a single participant can receive, the recommendation would depend on the size of the group but 2 different replies worked well in this research study. This seemed to have a positive impact for this study as it eventually lead learners to interact with classmates with whom they do not normally interact to fulfil the requirement of the task. This is

an aspect that contributes to literature for voice discussion forums as it was not found in any of the articles explored.

In this case, the idea of “real communication” is developed through tasks where learners have to express likes and dislikes, plans they have, or something related to their personal lives. For instance, for forum one, they had to show a picture of them or their families and then describe it using adjective clauses, for the second forum what their favourite movie was using passive voice, for the third, where they would like to go on vacation using gerunds in their different functions in English, the fourth describe their favourite song using at least three different adverbs and for the last one, they discussed what era of the past they would like to have lived in using at least three examples of past unreal conditionals. All the topics were decided by the same participants with the intention of aiding in fostering motivation and/or engagement.

In another text-based forum, Mazzolini & Maddison, (2003) found that more posts by instructors generated shorter discussion threads and that instructors who initiated discussions did not appear to stimulate discussion with all learners but to limited with high proficiency students instead. They suggest that peer to peer interaction generate more discussion but instructors who disappear from the forums are not very popular, and do not recommend it. For this research, the idea was for students to know that the teacher was present but without interfering with their communication.

A very relevant aspect to consider when designing the topics is make sure that the interaction required is related to real communication, even if it happens at a slower pace than it would during a synchronous session. Participants should be asked to talk about their own likes, dislikes or beliefs but giving them the option to decide about those topics by themselves. The tasks created in this research, where they had to share personal opinions, or preferences, or ideas, and then had to reply to the same posts of others appeared to work very well which is consistent with the views of Woods & Ebersole, (2003).

Another aspect that emerged from this research study was the benefit of allowing participants multimodal contribution, the downside of this is that the effect of multimodal contribution for the development of spoken features is a topic that is under-researched.

Another relevant aspect learned from this research study is that, when designing asynchronous discussion forums, instructors need to make sure they demonstrate how to use any new technological tool, not only instruct them to use it. For this, it is also important to have a F2F voice forum practice session at the beginning of the course to solve technical problems such as poor audio quality, hardware or software problems to answer the forums.

Consistent with literature, another aspect that appeared to decrease motivation was setting long times for contributing. The mitigation strategy found for this was setting two deadlines one for contributing and the other one for replying although there was reticence by a few participants.

6.1.4 One More Question that Arises from this Project Is “What is the Impact of Collaborative Forum Task Design?”

This question emerged during the evolution of this project as it was not part of the initial research questions but the collaborative aspect of forum generated a stronger impact than intended. The impact of this specific collaborative cycle of design, experience, feedback was not found in literature and represents a contribution to literature to the field of ACMC in based forum design for video, voice and text based forums.

Collaborative design seems to have had a positive impact with the majority. By the end of the project, when evaluating the last forum, twenty-six participants reported liking the topics being used. It is probable that they like the forums more because they designed them or because they proposed the topics themselves. Those same topics that were related to their likes, dislikes and beliefs also supported the sense of community as participants started learning about each other, they started portraying their individualities through the discussion forums, this is what the Community of Inquiry refers to as Social Presence.

Several participants report a change in perspective regarding the use of discussion forums and shed light on a reflective process stating that they are more likely to use discussion forums when they become teachers now that they have participated in their design. Collaborative design together with the experience of answering forums seems to be beneficial for reflection, engagement/motivation and for pre-service teachers' acceptance of asynchronous discussion forums.

The idea of involving teacher trainees in the design of the tasks they will be performing during their courses seems to aid in engagement or motivation in general, so this is an approach that could be used not only in the design of discussion forums but other tasks of projects in general with teacher trainees. There seems to be a correlation between the feelings participants have towards the activities, and their perceived experience. Consequently, if they design the activities themselves with the assistance of a facilitator, their overall experience in any task or activity they design might improve. The cooperative decision making when deciding on topics made evident, that this type of activity has its shortcomings as people might vote against a good idea if it was presented by someone they do not like. In order for this to be a useful approach, the background of the learners need to be taken into account, if voice-based AoD task design is explored with

high-school students it may not have the same effect, but if only the decision of what topics to explore or use is applied, the effects might be positive.

An unexpected situation with the cooperative design of the forums was classroom dynamics in the sense that during the voting made for selecting the discussion forum plan option that participants liked the best so as to be used in their next discussion forum task, S7 would not vote for a good forum task plan if it came from a person who was not a friend. This could be mitigated by asking groups to present their ideas in similar pieces of paper, then the instructors read them assigning them a number and have learners vote for the number.

On the perspective of the learners, they found that working with this cycle of design, experience and feedback allowed them not only to develop their spoken production but also the aspects needed to consider when designing discussion forums. They engaged in a reflective process that is different from other students because the tasks they were designing could be used by them in the future, therefore their insight became more acute.

As final remarks, from the perspective of a teacher/researcher, being one can be both good and bad; good because I am able to make decisions and adjust the procedures of the class to respond to the feedback of the participants and thus be able to evaluate again in a short period of time. Bad because the amount of work is excessive, due to being both researcher and teacher, and does not allow to carry out all investigative activities in a proper manner, e.g. researcher diary, in depth analysis of more aspects yielded in the instruments, more in depth analysis of each of the indicators of speaking through different analysis techniques, in depth interviews of specific individuals among others.

This process of reflection has a vital part in Action Research as it allows the researcher to detect the areas that can be improved, either from the design of tasks, tools, technologies. The design of a project that integrates flexibility to adapt fast to a changing environment could prove very useful for Action Researchers. The process of the researcher reflection, is a limitation from my project that would present another perspective that could help in understanding the effects of AoD on the teaching and learning of spoken production to pre-service teachers.

Chapter 7 Conclusion

This concluding chapter reviews this collaborative research study and elucidates a reflection on the use and design of voice-based asynchronous online discussion forums and its impact on a group of undergraduate pre-service teachers' spoken performance and perception of how speaking is taught/learned online. This action research also set out to investigate strategies that participants used to complete the forums and what aspects were to be considered when designing discussion forums. Finally, an unexpected question emerged, exploring the impact of the collaborative design of voice-based asynchronous online discussion forums.

7.1 Outcomes in Voice-Based Asynchronous Online Discussion Forums

The Action Research approach undertaken for this project represented an opportunity to explore solutions to a problem present in a particular setting and a manner to involve the participants in their own learning, thus bringing about change in their context.

From the pre and post tests we learned that participants who identify as shy or that have a low proficiency in the language they are learning are more likely to benefit from AoD forums if everyone is given equal opportunities to participate. Conversely, we found that those who are extroverted or that have a high proficiency in the language appear not to benefit which is consistent with literature Elder and O'Loughlin, (2003)

From the class analysis as a whole, we learn that Teaching Presence from the Community of Inquiry is an important aspect to consider in the design of AoD forums, and that enabling Social Presence in the forums creates a sense of community within the participants. We also learn that integrating the views and opinions of the students into the design of forums has a positive effect on their motivation. We observed that the use of topics selected by the participants allow their peers to know them better, to empathize or to feel identified with them, thus increasing the sense of community.

From task design we can conclude that simpler tasks are preferred and that, in appearance they are easy but creating a voice post entails a strong cognitive load that could stall communication if it were synchronous, but its asynchronous nature allows extra time for participants to integrate more linguistic elements into their posts. Also, we can conclude that brief and detailed instructions allow participants to fulfil tasks more effectively.

This project also shows that when designing asynchronous discussion forums, it is important to demonstrate how to use any new technological tool, so that any problems arising can be dealt

with. It is also important to avoid long times for contributing, complex activities, lengthy instructions and mandatory video contributions.

It is also important to consider assigning marks to discussion forums as otherwise students tend to prioritize other activities. It is recommended that they be presented as extra credit in order to foster motivation. Allowing choice in the design of the forums in another aspect learned.

My contribution to the field of Asynchronous Computer Mediated Communication, specifically in voice-based AoD forums appears in the form of a strategy to foster interaction. This is to restrict the number of replies that a participant can receive, thus, forcing others to look for different partners to their usual ones, thus fostering interaction with different people and reducing demotivation that arises from not receiving any replies to the comments that the participants post.

A limitation to this study is that this approach to limit the interaction to a particular number of students would very likely need to be changed if the voice-based tasks are designed differently since they are dependent of the structure used. They can be adapted to fit other purposes or aims, but for a more genuine interaction, the option of replying to their topic or post of interest is probably a good idea.

A second contribution to this field comes in the form of a cycle for collaborative action research that involves pre-service teachers in the design of voice-based forums. The cycle starts by presenting learners with a grammar point to exercise and they are given a set of considerations for designing forums and set into groups of maximum five people for designing the forum, this way their reflective process as future teachers begin. Then, they are asked to present the design proposals they created so that their peers can analyse the designs made and vote for the best design, these two activities, designing and voting enable higher order critical thinking in the participants.

After that, the winning design is presented for the pre-service teachers to complete it. With this the participants will experience their own design and will be able to find areas to be improved taking the perspective of a student but also reflecting as future teachers. Once they have finished their participation, they are asked to gather in groups of five and share ideas on how that specific discussion forum could be improved, it can be by either changing the topic, the interaction patterns, the mode, or time for contributing, or any other idea they consider valuable to change. Next, one person from each of the groups shares with the whole class their feedback so that everyone can appreciate their analysis. Finally, they are asked to individually generate personal feedback “evaluation” of the forum. With that, the cycle ends and begins again with pre-service teachers being able to feed their new design with the reflections from the previous one.

All this information can be very beneficial for educators and instructors who intend to use or are already using and would like to inform their practice with research on AoD forum design. This project can be particularly valuable for my employer since the use of discussion forums and their benefits and limitations are not a widely studied subject. Action Research is an approach that is beginning to appear and the use of technology to assist learners in case of another situation such as the Covid pandemic can prove to be very useful.

Action research allows for the application of this cycle and provides possible solutions to problems in fairly accelerated way. However, the amount of information generated and the time available for processing it is an obstacle for being able to benefit more from it.

This research presented several limitations, one is that it is from a very specific sample, pre-service Mexican teachers with a proximity to an English-speaking country. Cultural differences might yield different results in other settings. In addition, the Action Research cycle adopted generated a very large amount of data to be analysed, maybe focusing on one or two elements could allow for more in-depth analysis of those elements.

Another limitation was the different conditions applied to the pre and post-tests, this could have affected the results. While the pre test was administered in a university premise with the researcher available for clarifying doubts or assisting with any technological issue, the post test was administered remotely where participants had a specific date to take the test wherever they thought appropriate. The lack of assistance or a suitable space where to take the test might have influenced the result.

One more limitation was the abandonment of the researcher's voice diary. Although it did not hinder the reflective element of action research on the part of the learners since this element was developed as a group reflection and then refined individually, it affected the recording of reflective elements that occurred outside those feedback sessions. It did not affect the researcher's ability to manage or modify the intervention but comments made by participants or interactions observed in class or during the design process that could have enriched the data with the perspective of the researcher were not recorded.

A recommendation for researchers who would like to engage in a similar research project would be to include the perspective of the researcher, either through a diary or any other means. To try to get a person to assist you with organizing the large volumes of data that are generated and to explore different possibilities of adapting the project as it progresses. These adjustments made proved to be very valuable in understanding how to improve the task designs for this particular group.

This research leaves multiple possibilities for future research. For future studies, participants can be included in the grading the forum participations as this is an important part of forums and has the potential of fostering increased reflection for future teachers. Also, another study can explore the teaching of strategies used for answering the forums before they start participating on them to see if there are positive effects.

Researching the student design process of voice-based tasks for AoD and the decision making they use for organizing the tasks is another very interesting path to take. Using different methods for selecting the winning designs or tasks could also prove to be of value.

Another study that could be very beneficial would be the impact of peer-to-peer feedback on their design in different modes, text, voice, and video over the design of their forums and over their posts in forums. In accordance with the work of Mazzolini & Maddison, (2003) where they state that “we need better measures of the quality of interactions in a discussion forum.” Other measurements instead of the IELTS rubric could be used to analyse voice posts.

The effect of age, gender, or profession on the experience of voice-based discussion forum experience could also be studied as this study was conducted with university undergraduates. Finally, a study comparing multimodality over only one of the modes could prove to be of value for this field.

Appendix A Focus Group Criteria for Selecting Participants

- Low technological use
- High technological use
- Like to use technology
- Don't like to use technology
- Low speaking skill
- High speaking skill
- Middle speaking skill
- Low accuracy
- High accuracy

Appendix B Semi-structured interview for Focus Group

The following questions are intended to explore learners' beliefs, opinions and experiences of the following through the discussion of 4 main themes: 1) how is "speaking" learned? 2) how is accuracy attained in speaking? 3) how does or can technology help develop "speaking" and accuracy? And 4) What activities through technology do you think are (or could be) most effective to develop "speaking"?

Try to answer as a student and as a future teacher (the following questions can be used to keep the conversation going)

- What difficulties did you have when learning speaking?
- What technologies can help us with this teaching?
- Is it possible to develop online teaching of speaking, how?
 - o Can you think of an example?
- What do you think about discussion forums?
- What type of tools/platforms would you like to use to carry out activities for speaking? (schoolology, Moodle, facebook, Whatsapp, etc) Why?
- Do you prefer people to know who you are online or do you prefer to remain anonymous? Why?
- What type of tasks do you think would be beneficial for improving accuracy in speaking online?
- Which of these (text, voice, video) forums would help you become more accurate in speaking? Why?
- How much time do you think assignments should take?
- Where do you think it is more beneficial to do the assignments (at school, home, mobile, other)?

Appendix C Level V class syllabus designed by researcher/teacher



UNIVERSIDAD DE SONORA
FACULTY OF FINE ARTS AND HUMANITIES
DEPARTMENT OF FOREIGN LANGUAGES
BACHELOR OF ARTS IN ENGLISH LANGUAGE TEACHING
ENGLISH IV
15 CREDITS



Teacher: Gabriel Francisco Leon Fontes MGLE
August 12th, 2019
Classroom: TBD
Schedule: Mon – Fri. From 08:10 am to 09:50am

OVERVIEW

The present course will focus on 4 major areas: Grammar, Academic Writing, Reading, and Speaking. The grammar component of the course will help advanced students of English understand and practice English grammar through the four language skills. The aim is for students to use the language confidently and appropriately and to approach the study of grammar with insight into future language teaching.

SPECIFIC OBJECTIVES:

- Improve each one of the four main skills in ELT
- Use the grammar studied in the course to communicate in English
- Recognize grammatical mistakes from the grammar studied
- Use the APA system to practice paraphrasing, citing and referencing
- Practice writing at an academic level (essay)
- Practice reading academic texts from the university's online libraries
- Practice listening at an academic level (TOEFL practice)

STRUCTURE OF THE COURSE

The course is structured in 5 units focused on syntactical aspects of the English language, organized from greater to lesser degree of generality and abstraction.

CONTENT

UNIT I. Adjective Clauses (12 Ago – 30 Aug)

- 1) Grammar
 - a. Adjective Clauses: Review and Expansion
 - b. Adjective Clauses with prepositions; adjective phrases

- 2) Writing
 - a. Parts of a paragraph
- 3) Reading
 - a. How to search for academic texts online (university resources)
 - b. Topics of interest (ELT Journals)
- 4) Presentations (must have: lesson plan, material, post class-reflection)
- 5) Discussion Fora
- 6) Evaluation

UNIT II. The Passive (2 Sep – 25 Sep)

- 1) Grammar
 - a. The passive: Review and Expansion
 - b. The passive in different tenses
 - c. The passive to describe situations and report opinions
- 2) Writing
 - a. Organization and parts of an essay
- 3) Reading
 - a. Practice finding academic texts online
 - b. Topics of interest (ELT Journals)
- 4) Presentations (must have: lesson plan, material, post class-reflection)
- 5) Discussion Fora
- 6) Evaluation

UNIT III. Gerunds & Infinitives (26 Sep – 16 Oct)

- 1) Grammar
 - a. Gerunds
 - b. Infinitives
- 2) Writing
 - a. Paraphrasing
 - b. Summarizing
- 3) Reading
 - a. Topics of interest (ELT Journals)
- 4) Presentations (must have: lesson plan, material, post class-reflection)
- 5) Discussion Fora
- 6) Evaluation

UNIT IV. Adverbs (17 Oct – 06 Nov)

- 1) Grammar
 - a. Adverbs: Sentence, focus and negative
 - b. Adverb clauses
 - c. Adverb and adverbial phrases
 - d. Connectors

- 2) Writing
 - a. APA Citing
 - b. APA Referencing
- 3) Reading
 - a. Topics of interest (ELT Journals)
- 4) Presentations (must have: lesson plan, material, post class-reflection)
- 5) Discussion Fora
- 6) Evaluation

UNIT V. Conditionals and the subjunctive (07 Nov – 29 Nov)

- 1) Grammar
 - a. Conditionals; Other ways to express unreality
 - b. More conditions; the subjunctive
- 2) Writing
 - a. Writing an essay using APA style
- 3) Reading
 - a. Topics of interest (ELT Journals)
- 4) Presentations (must have: lesson plan, material, post class-reflection)
- 5) Discussion Fora
- 6) Evaluation

METHODOLOGY

Classes will be taught in English combining: presentations and demonstration with individual and team work where there is evidence of the application of what has been studied at an advanced level. This will be a face to face course but all assignments will be uploaded to an LMS (Schoology). This is a 80% theory and 20% practical course, this last one occurring in an online environment).

Schedule	Monday	Tue	Wed	Thu	Fri
02:00-03:00	Grammar intro	Ss presentations	Reading	Writing	Online Practice
03:00-04:00	Focus on grammar	Grammar practice	Listening	Test Practice	Online Practice

ASSESSMENT

Course assessment will occur as follows:

- Discussion fora (20%)
- Presentations (15%)
- Participation (10%)
- Book (10%)
- Reading Reports (15%)
- Tests (10%)
- Final assessment (20%)

TOTAL: 100%

EXTRAORDINARY ASSESSMENT

It will consist of 2 parts:

- (1) The first will be a presentation of all the grammatical points studied in class (how to teach them). This will be 50% of your grade.
- (2) The second one will consist of a test, which will account for the remaining 50%.

CODE OF CONDUCT

All conduct from both the teacher and the students must be according to that stated by the [school rules](#) of the Universidad de Sonora.

ATTENDANCE

1. A student can have a maximum of 12 absences. More than that will be considered as a failing student automatically. Any students with a failing grade will have to undertake an extraordinary assessment. Said **absences are to be used for emergencies, sickness, or visits to academic events**, there are **no documents accepted to justify absences**. It is the missing student's responsibility to find out if there is homework or not.

PUNCTUALITY

1. Being punctual is part of professionalism. Thus, we will only have 5 minutes after the start of the class to arrive, this will constitute a tardy; once a student has 3 tardies, they constitute an absence.
2. For the case of late assignments (homework), the following criteria will be used:
 - Homework submitted between 1 min and 24 hours late will lose 50% of its value.
 - Homework submitted between 24 hours and 1 min and 48 hours late will lose 75%.
 - Homework submitted after 48 hours are graded with a "0"%.

HOLIDAYS

1. Only those mentioned in the [school calendar](#). If the teachers is not attending, he will let you know via Schoology, in person or via one of your classmates.

PLAGIARISM

1.- It is completely unacceptable, if found the student will receive an automatic "0" and the program coordination will be notified immediately.

REFERENCES

All references are available either on the department's library or online in the assignments posted by the teacher on Schoology.

Basic Bibliography

Maurer, J. (2012). *Focus on Grammar 5: an integrated skills approach*. (4th ed.) NY: Longman.

Oshima, A. and Hogue A. (2007). *Introduction to Academic Writing*. (3rd ed.) NY: Longman.

Phillips, D. (2004). *Longman Preparation Course for the TOEFL Test*. NY: Longman.

Complementary Bibliography:

Azar, B. (1989). *Understanding and using English grammar*. Englewood Cliff, N. J.: Prince Hall.

Gear & Gear. (2007). *Cambridge Preparation for the TOEFL test 4th edition*, N. Y.: Cambridge University Press.

Harmer, J. (1991). *The practice of English language teaching*. (2nd ed.). Harlow, USA: Longman.

Mahnke, M. K. & Duffy, C. B. (1996). *The Heinemann ELT TOEFL Preparation Course*. UK: MacMillan.

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Nunan, D. (1992). *Collaborative language learning and teaching*. Cambridge: CUP.

Richards, J. C. & Nunan, D. (1990). *Second language teacher education*. Cambridge: CUP.

Oshima, A. & Hogue, A. (1997). *Writing Academic English*. (3rd ed.) NY: Longman.

OPTIONAL:

To be negotiated depending on their reliability and appropriateness.

All information presented herein is subject to change to better suit the needs of the class.

Contact Information

E-mail: gabrieljeon@unison.mx

Appendix D Forum No 1, designed by the researcher

Introduction (text based AoD forum, audio & video were not requested, and ss did not use it to participate)

Example of learner participation and interaction

Appendix E Forum No 2, co-designed by researcher and participants

Introduction (audio-based AoD forum, only audio posts were specifically requested)

Discussion forum #2
Due: Wednesday, September 25, 2019 at 11:59 pm

Hi guys,

As we all know, movies are a great part of our culture and they are enjoyed by almost everyone. Because of that, I would like to know which is your favorite movie and, of course, why it is so.

That said, for this forum you are going to upload an audio (no text, pictures or video) where you explain the plot of your favorite movie (using passive voice), but there is a catch! You must not say the names of any character or place in the movie so that we can guess which movie it is. This first audio of yours represents 50% of your grade for this forum.

Once you have uploaded your audio, you will listen to the audio of 2 of your classmates and will try to guess what is their favorite movie by asking them then 1 question (in passive voice) only to confirm that it is the movie you think it is. To do this, you must also upload an audio with the question (again, no text, video or images). This second audio will represent 25% of your grade for this forum

*** NOTE: There is a limit of 3 questions per student, so if a student already has 3 questions, you have to find another student to ask questions to as your participation will not be considered for grading purposes.

Once you have listened to the questions of your classmates, you will answer their questions in one more audio file. This third audio will represent 10% of your grade for this forum

After that, they will try to guess which is your favorite movie. To finish this forum, you will upload one more audio file explaining the name of your favorite movie and explain why it is your favorite movie (this time, passive voice is not required, but you can use it if you wish to). This audio will represent 15% of your grade for this forum

EXAMPLE:
Listen to audio 1, attached to this assignment

Posted Mon Sep 16, 2019 at 9:11 pm

AUDIO 1.m4a 2 MB | VIEW

Activar Windows
Ve a Configuración para activar Windows.

Learner participation and interaction (Researcher clicked the “like” button to show presence)

English IV, from the BA in ELT at the Universidad de Sonora.
Grading period: 2019-2 LEI
Location: Universidad de Sonora, Hermosillo, Sonora
Meeting days: Mon Tue Wed Thu Fri

Discussion forum #2
231 Posts

Write a comment

Gabriel Leon Mon Sep 16, 2019 at 9:20 pm
If you do not have a voice recorder, you can try vocaroo (see link attached to learn how to use it). Please upload the audio file, not the link
Vocaroo
<https://www.youtube.com/watch?v=vaaBo6ncsXk&t=1s>
Like 1 · Reply

[Redacted] Fri Sep 20, 2019 at 2:14 pm
My_favorite_movie.m4a 2 MB
You like this
Unlike 1 · Reply

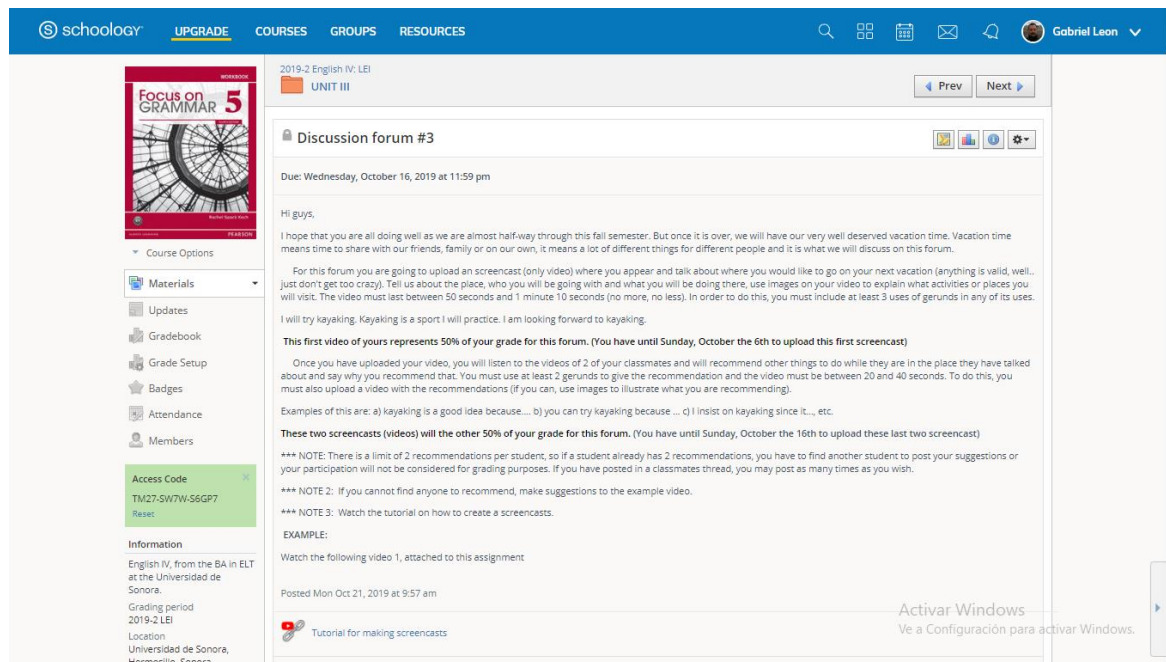
[Redacted] Sun Sep 22, 2019 at 11:49 am
WhatsApp_Audio_2019-09-22_at_11.48.02_AM.mp4 183 KB
Unlike 1 · Reply

Activar Windows
Ve a Configuración para activar Windows.

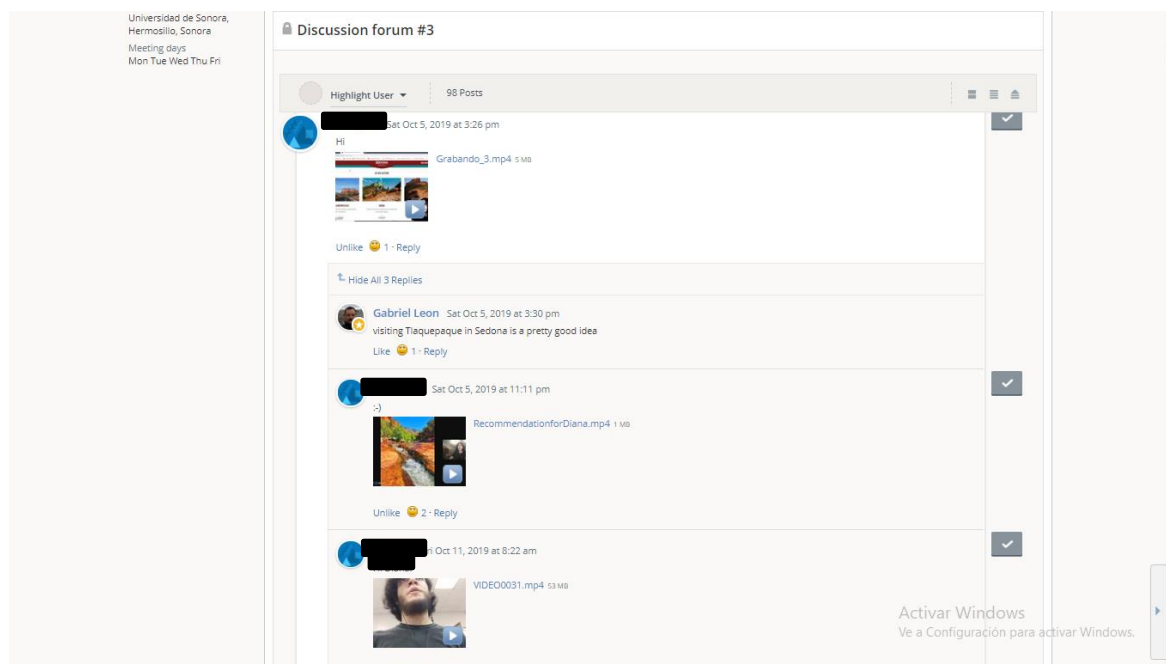
<https://app.schoolology.com/likes/c/512320507>

Appendix F Forum No 3, designed together by researcher and participants

Introduction (video-based AoD forum, only video posts were specifically requested)



Learner participation and interaction (researcher clicked the “like” button and made a comment to show presence, now others started to “like” their classmate’s posts)



Appendix G Forum No 4, designed together by researcher and participants

Introduction (choice-based AoD forum, they could post only with audio/video but reply as they preferred)

The screenshot shows the Schoology interface for a course titled "2019-2 English IV: LEI". The forum post is titled "Discussion forum #4" and is due on Sunday, November 10, 2019, at 11:59 pm. The post content includes:

- Greeting: "Hi to all,"
- Introduction: "I hope this weekend treated you well. For this forum we will discuss something that most of us enjoy very often, songs! With so many genres and knowing that many people choose the songs to listen to depending on the mood they are in when listening to music, we will talk about our favorite songs."
- Assignment Instructions: "For this forum you are going to upload (you decide) either an audio or a screencast a file where you talk about your favorite song. Without saying the name of the song or the artist (and not writing excerpts of the lyrics), tell us what the genre is, what the song talks about (don't make it too easy) and tell us why you like that particular song. The video/audio must last between 50 seconds and 1 minute 10 seconds (no more, no less). In order to do this, you must include at least 3 uses of adverbs in any of its uses (and stress the adverb when you say it)."
- Example: "I really enjoy listening to this song because it excitedly sets the mood for working out or for filling ourselves with energy and at the same time it deals sensibly with the topic of war veterans."
- Grading Information: "This first video/audio of yours represents 50% of your grade for this forum. (You have until Sunday, November the 3rd to upload this first file)"
- Additional Instructions: "Once you have uploaded your video, you will listen to the audios/videos of 2 of your classmates and will try to guess what their favorite song is and say why you like it or why you don't (you will give your opinion based on the song you think it is). You must use at least 2 adverbs to give your opinion about that particular song and the video/audio must be between 20 and 40 seconds."
- Examples: "a) I like 'Despacito' by Luis Fonsi because it has a very good rhythm.... b) I like 'the beautiful people' by Marilyn Manson because it makes you react quickly to the beat, ...etc."
- Final Instruction: "You can answer in writing if your classmates guessed what your favorite song is."
- Second Grading Information: "These two files (videos/audios) will the other 50% of your grade for this forum. (You have until Sunday, November the 10th to upload these last two files)"
- Notes: "*** NOTE: There is a limit of 2 guesses per student, so if a student already has 2 guesses, you have to find another student to post your attempt or your participation will not be considered for grading purposes. If you have posted in a classmates thread, you may post as many times as you wish." and "*** NOTE 2: Watch the tutorial on how to create a screencasts in case you do not know how to make them"
- Example: "Watch the following video 1, attached to this assignment"
- Post Date: "Posted Mon Oct 28, 2019 at 7:34 am"

Learner participation and interaction (researcher clicked the "like" button to show presence)

The screenshot shows the forum post with learner participation. The post title is "Discussion forum #4" and it has 147 posts. The visible replies are:

- Reply 1: A student posts "My favorite son is ..." with an audio file named "My favorite song.m4a" (418 KB). It has 4 likes and a reply button.
- Reply 2: A student posts "heloowwwwww" with a video file named "Monsefavoritesong_Elsa.m4a" (318 KB). It has 2 likes and a reply button.
- Reply 3: A student posts "I agree with you that Shallow is a beautiful song and always listen to it too, but, it is not my favorite song. The song I was tryn to describe was I always remeber us this ways. Have you heard it is amazingly beautiful as well as Shalow." It has 1 like and a reply button.
- Reply 4: A student posts "Wow! I was completely sure that the song was shallow. No, I haven't listened to it but if it is as good as Shallow will." It has 1 like and a reply button.

The researcher's profile is visible at the top left, and a "Like" button is highlighted on the third reply.

Appendix H Forum No 5, designed together by researcher and participants

Introduction (choice-based AoD forum, they could post only with audio/video but reply as they preferred)

The screenshot shows a Schoology interface. At the top, there's a navigation bar with 'UPGRADE', 'COURSES', 'GROUPS', and 'RESOURCES'. The user 'Gabriel Leon' is logged in. On the left, there's a sidebar with 'Course Options', 'Materials', 'Updates', 'Gradebook', 'Grade Setup', 'Badges', 'Attendance', and 'Members'. Below that is an 'Access Code' box with 'TM27-SW7W-S6GP7' and a 'Reset' button. The main content area is for a '2019-2 English IV; LEI' course, 'UNIT V'. The forum title is 'Discussion forum #5', due on Sunday, November 24, 2019 at 11:59 pm. The post content includes a greeting, a topic introduction about discussing different decades, instructions for uploading audio or video, and a deadline of November 24. It also includes a note about a limit of 2 replies per student. At the bottom, there's a 'Write a comment' input field.

Learner participation and interaction (researcher clicked the “like” button to show presence)

This screenshot shows the same forum page but with three posts. The first post, from a user with a blue profile picture, is titled 'This is my favorite decade' and includes an audio file 'My favorite decade.mp3'. The second post, from a user with a black profile picture, is titled 'Answer to Beto.m4a'. The third post, from a user with a blue profile picture, is titled 'WhatsApp_Audio_2019-11-18_at_10.31.40.mp4'. Each post has a 'Like' button and a 'Reply' button. The 'Like' buttons have been clicked, showing a yellow heart icon and the number '1' next to it. The 'Write a comment' input field is visible at the top.

Appendix I University's digital library website

The screenshot shows the 'BIBLIOTECA DIGITAL' website. The main navigation bar includes 'Inicio', 'Unison', 'Bibliotecas', and 'Comentarios'. Below this, there are tabs for 'Colecciones Digitales', 'Capacitación', 'Servicios', and 'CATÁLOGO EPA'. The page title is 'Bases de Datos'. On the left, there are sections for 'SERVICIOS', 'RECURSOS', 'LIBROS ELECTRÓNICOS', and 'BASES DE DATOS'. The main content area features a table of databases with columns for 'Titulo', 'Division', and 'Mi Espacio'.

Titulo	Division	Mi Espacio
5MinuteConsult	Biología y de la Salud	+
Academic Search Complete	Multidisciplinaria	+
Aclands Anatomy	Biología y de la Salud	+
ACM Digital Library (Revistas de Association for Computing Machinery)	Exactas y Naturales	+
ACS Publications (Revistas de la American Chemical Society)	Biología y de la Salud	+
AIP Scitation (Revistas de American Institute of Physics)	Exactas y Naturales	+
Alfaomega (Libros electrónicos)	Ingeniería	+
AMS (American Mathematical Society)	Exactas y Naturales	+
Annual Reviews	Multidisciplinaria	+
APS Physics (Revistas de American Physical Society)	Exactas y Naturales	+
Bates Visual Guide	Biología y de la Salud	+
BioOne Research Evolved (Colección de revistas)	Biología y de la Salud	+
Business Source Complete (EBSCO)	Economico Administrativas	+
Cambridge Collection (Colección de revistas)	Multidisciplinaria	+
Cengage Libros	Multidisciplinaria	+

The screenshot shows the 'BIBLIOTECA DIGITAL' website. The main navigation bar includes 'Inicio', 'Unison', 'Bibliotecas', and 'Comentarios'. Below this, there are tabs for 'Colecciones Digitales', 'Capacitación', 'Servicios', and 'CATÁLOGO EPA'. The page title is 'Acceso Remoto'. On the left, there are sections for 'SERVICIOS', 'RECURSOS', 'LIBROS ELECTRÓNICOS', and 'BASES DE DATOS'. The main content area features a section titled '¿QUÉ ES?' followed by a description and a section titled 'PROCEDIMIENTO PARA INTERNET EXPLORER'. A step-by-step guide is provided, with 'PASO 1' showing a screenshot of the Internet Explorer menu.

¿QUÉ ES?
Es una serie de pasos que sirve para poder acceder, desde una ubicación externa a la Universidad de Sonora, a recursos electrónicos disponibles en la página de biblioteca digital.

PROCEDIMIENTO PARA INTERNET EXPLORER

PASO 1. En Herramientas (Alt-X), seleccionar "Opciones de Internet"

The screenshot of the Internet Explorer menu shows the following options:

- Imprimir
- Archivo
- Zoom (100%)
- Seguridad
- Agregar sitio al menú Inicio
- Ver descargas
- Administrar complementos
- Herramientas de desarrollo F12
- Ir a sitios anclados
- Configuración de Vista de compatibilidad
- Informar de problemas de sitios web
- Opciones de Internet
- Acerca de Internet Explorer

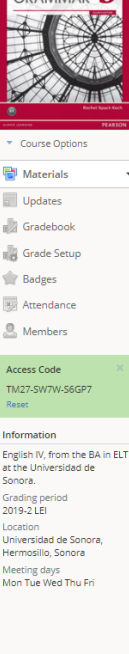
Appendix J Learners selection of topics to explore during course

The screenshot displays a Schoology course interface. On the left, a sidebar contains navigation options: Updates, Gradebook, Grade Setup, Badges, Attendance, Members, and an Access Code (TM27-SW7W-56GP7). The main content area lists several topics with learner engagement metrics:

- Language Ego: 1 Like, Deleted (Tue Aug 13, 2019 at 8:44 am)
- Self confidence: 1 Like, Deleted (Tue Aug 13, 2019 at 8:44 am)
- The native language effect: 1 Like, Deleted (Tue Aug 13, 2019 at 8:45 am)
- Automaticity: 1 Like, Deleted (Tue Aug 13, 2019 at 9:05 am)
- Linguistic relativity: 1 Like, Deleted (Tue Aug 13, 2019 at 9:06 am)
- Learner-centered teaching: 1 Like, Deleted (Tue Aug 13, 2019 at 11:25 am)
- The affective filter: 1 Like, Deleted (Tue Aug 13, 2019 at 3:02 pm)
- Teaching English to deaf students: 1 Like, Deleted (Tue Aug 13, 2019 at 4:10 pm)
- How does dyslexia affects in English teaching: 1 Like, Deleted (Tue Aug 13, 2019 at 6:07 pm)

Below the topics, a comment by Gabriel Leon is shown with the text "focus on one". To the right, a vertical list of learner avatars and names is visible, each accompanied by a progress indicator (e.g., 75/100) and the status "On time". A watermark "Activar Windows" is present in the bottom right corner of the screenshot.

Appendix K Learners final essay and presentation



Course Options

- Materials
- Updates
- Gradebook
- Grade Setup
- Badges
- Attendance
- Members

Access Code
TM27-SW7W-56GP7
Reset

Information
English IV, from the BA in ELT at the Universidad de Sonora.
Grading period 2019-2 LEI
Location Universidad de Sonora, Hermosillo, Sonora
Meeting days Mon Tue Wed Thu Fri

Due: Friday, December 6, 2019 at 11:59 pm

For this final assignment your grade will be divided into 2 parts, a final essay and a presentation:

**** DUE DATES:** (The essay was for Friday 29th as discussed in class, although almost everyone has submitted it already, final presentation will be during the week from the second to the 6th of December.)


1.- Final essay: This should be an argumentative essay with a minimum extension of 600 words. Remember that this essay should argue in favor or against the topic you have been reading throughout the semester.


- You must have (through Mendeley) at least 7 in-text citations (at least one must be over 40 words) which should have their corresponding bibliographic reference. In order to check this you need to do a cross reference between each in text quote and its reference.
- The argument either in favor or against must be explicitly clear.
- Have a 3 part organization (intro, body, conclusion)
- It must be submitted in MS Word, with a Times New Roman 12 font.
- It must have connectors (conjunctions) for the cohesion of paragraphs.

2.- A final presentation of your work: This should be a power point (or any other software) presentation of your essay where you explain to the class the point you are trying to make in your essay.


- Have a cover with Uni, faculty and department reference, Name of the class, teacher, student and the date.
- It must have only bullet points (no big chunks of text), so no reading is allowed, only bullet points.
- Make the presentation sober, a presentation style that is intended for other teachers not for children (soft colors and transitions, etc)
- Include pictures or charts to help convey your idea
- Be very well organized
- Have no grammar mistakes
- Give a clear conclusion
- Include references
- Remember, this is a Conference type of presentation, with that in mind, remember the premise: "what will my audience learn or take from this presentation?" This needs to be very clear.

Posted Sat Aug 10, 2019 at 8:40 pm


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 [Rubric Oral Presentations.pdf](#) 89 kb | % view

Comments

 [Gabriel Leon](#)
<https://academicguides.waldenu.edu/writingcenter/grammar/runonsentences>

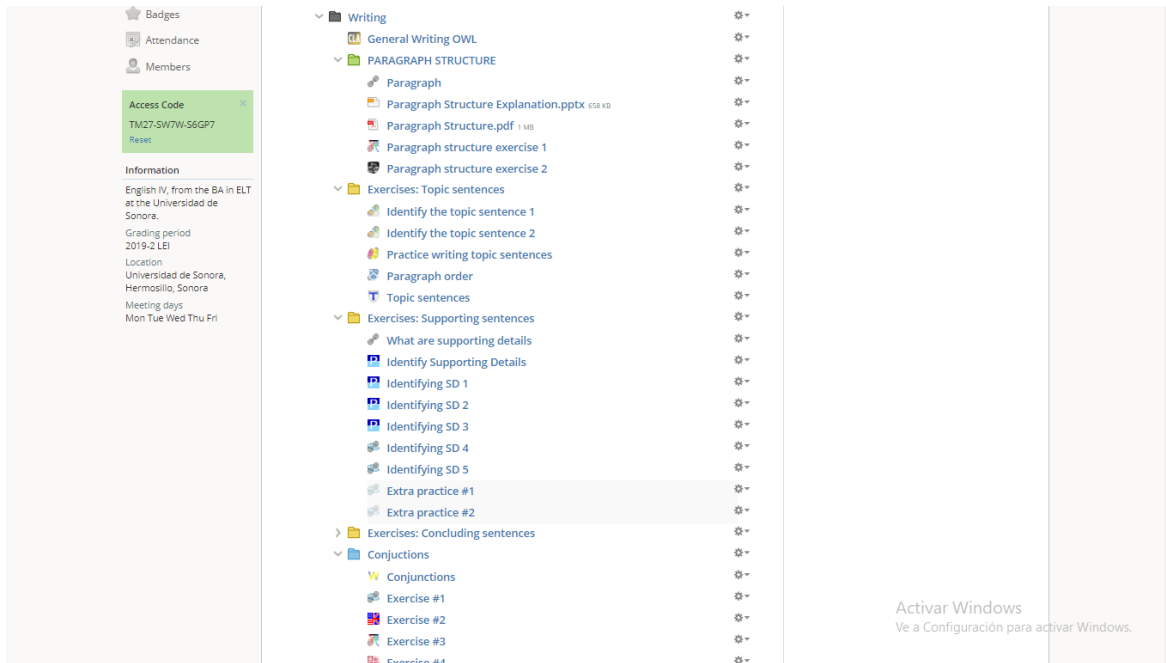
Reply · Like · Delete · Sun Dec 1, 2019 at 11:18 am

Submissions  Received (36/37) ▾

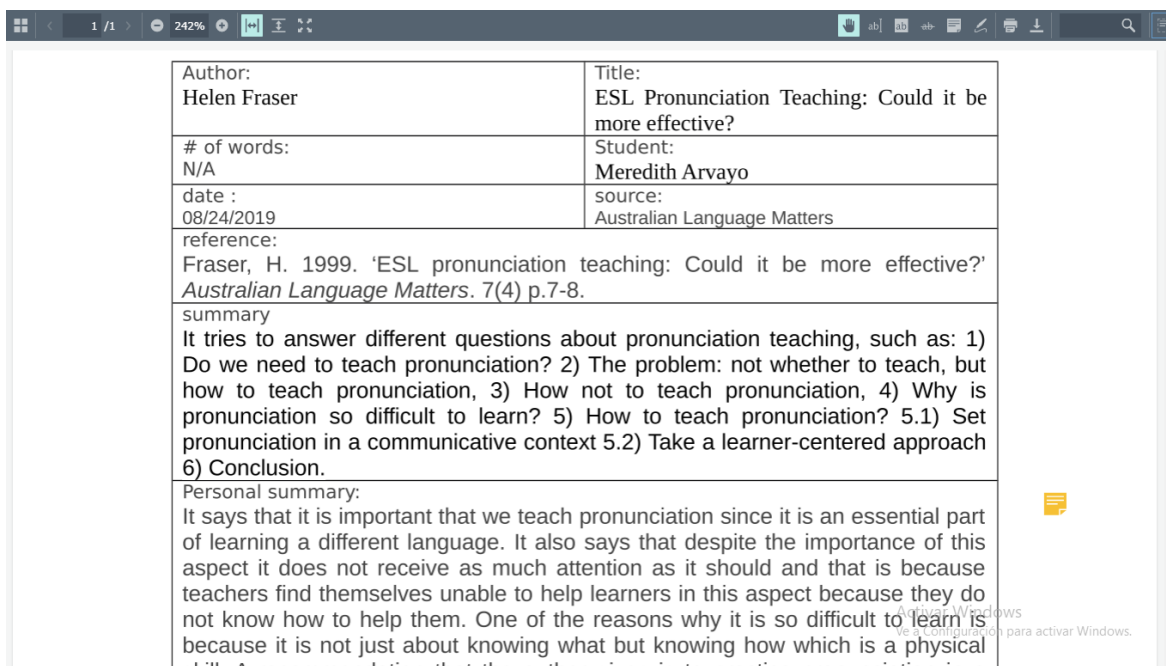
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Appendix L Learners writing activities

Activity type one



Activity type two



Appendix M Forum evaluation sheet after every discussion forum

The screenshot shows a Schoology assignment page for '2019-2 English IV: LEI'. The assignment is titled 'Assessment for forum #1 (in text)' and is due on Sunday, September 8, 2019, at 11:59 pm. The assignment description includes a 'Hi to all,' greeting, a request to upload a file, and a 'Task Evaluation Sheet.docx' attachment. The 'Submissions' section shows 35/37 submissions received, with a list of scores and statuses (e.g., 100/100 - On time, 100/100 - Late). The 'Comments' section is empty, and there is a 'Write a comment' input field with a 'Post' button.

Example of an evaluation sheet submitted

The document is titled 'Task Evaluation Sheet' and is from the University of Southampton. It contains an introduction and five numbered questions with handwritten answers:

Introduction: This research project deals with the design and implementation of Asynchronous Online Discussion Forums and you have just participated in one of these task-based fora. To better understand the design process of Asynchronous Online Discussion Fora, can you answer the following questions:

- 1.- What did you like from this task? Why?**
I liked that we were able to practice grammar through a more personal theme because it helps me (at least personally) to understand the topic better when I use it that way.
- 2.- What did you not like from this task? Why?**
I did not like that we had to ask to some of our classmates because the pictures were a little limited and what I wanted to ask was already asked.
- 3.- What would you change from this task to improve it? Why?**
Maybe just asking to one of our classmates so questions would not be repeated so fast.
- 4.- What is something you would not change from this task? Why?**
Asking a question using an adjective clause because the whole point of the forum was to practice them.
- 5.- Can you explain how you would give this activity to your own students?**
Almost the same way but I would either ask my students to upload two pictures (so there is more variety) or just comment to one of their classmates instead of two or three.

Task Evaluation Sheet

Introduction: This research project deals with the design and implementation of Asynchronous Online Discussion Forums and you have just participated in one of these task-based fora. To better understand the design process of Asynchronous Online Discussion Fora, can you answer the following questions:

- 1.- What did you like from this task? Why?

- 2.- What did you not like from this task? Why?

- 3.- What would you change from this task to improve it? Why?

- 4.- What is something you would not change from this task? Why?

- 5.- Can you explain how you would give this activity to your own students?

[07/18/2019] [1]

[Ethics/IRAS number (if applicable)]

Task evaluation sheet format in MS word.

Appendix N Final Course Reflection

The screenshot shows a Schoology assignment page for 'FINAL COURSE REFLECTION' in a 2019-2 English IV: LEI course. The assignment is due on Friday, December 6, 2019, at 12:00 pm. The instructor's message reads: 'Hi Guys, As you know, we have reached the end of this course and part of being a good teacher is to be able to reflect on the things we do well and the things we do not so that we can improve the ones where we can. In order to do this, I am going to ask you to download the attached file and to complete a reflection for this course based on the questions there (any other aspect that you would like to add even if it is not in the questions is welcome). As part of this reflection I will ask you to go to schoology and look at your previous work (open your first work, then the second, and so on) so as to analyze if there has been a change in the work you have been doing. You can answer this either in English or in Spanish. Posted Sun Dec 1, 2019 at 9:06 pm'. A file named 'Final Reflection English IV BA ELT.docx' (181 KB) is attached. The 'Submissions' column shows 30/37 students have submitted, all with a score of 100/100 and 'On time' status. A 'Comments' section is empty.

Example of one of the learner’s opinion on the development of speaking

The document page contains student feedback on course activities. At the top, it says 'do not think that I learned much about argumentative essays.' Below this, the 'SPEAKING' section describes forum activities and includes a student's comment: 'I think that I am a little bit more fluent in the language and I can explain myself better than when I started the semester. In regarding to the audios of the forum, they made me feel a little bit anxious at first because I had to do many attempts in order to make it right.' The 'GRAMMAR' section describes grammar practice activities and includes a student's comment: 'I really like most of the presentation because most of my classmate did a great job but I did not enjoy the book practice because it was a little tedious. On the other hand, the TOEFL exercises were very useful because I practiced and learned grammatical rules.' The 'TEACHING OF GRAMMAR' section describes grammar teaching activities. The page number '3' is visible at the bottom center.

Appendix O Guiding questions for final interview



Final Interview

Introduction: As part of this research project, you have participated in different activities related to asynchronous online discussions and for this I thank you sincerely. To finish this project, there are some questions that can help me understand better the process of developing good Asynchronous Online Discussions and that I ask you to answer.

- 1.- What did you expect to learn from this project when you began?

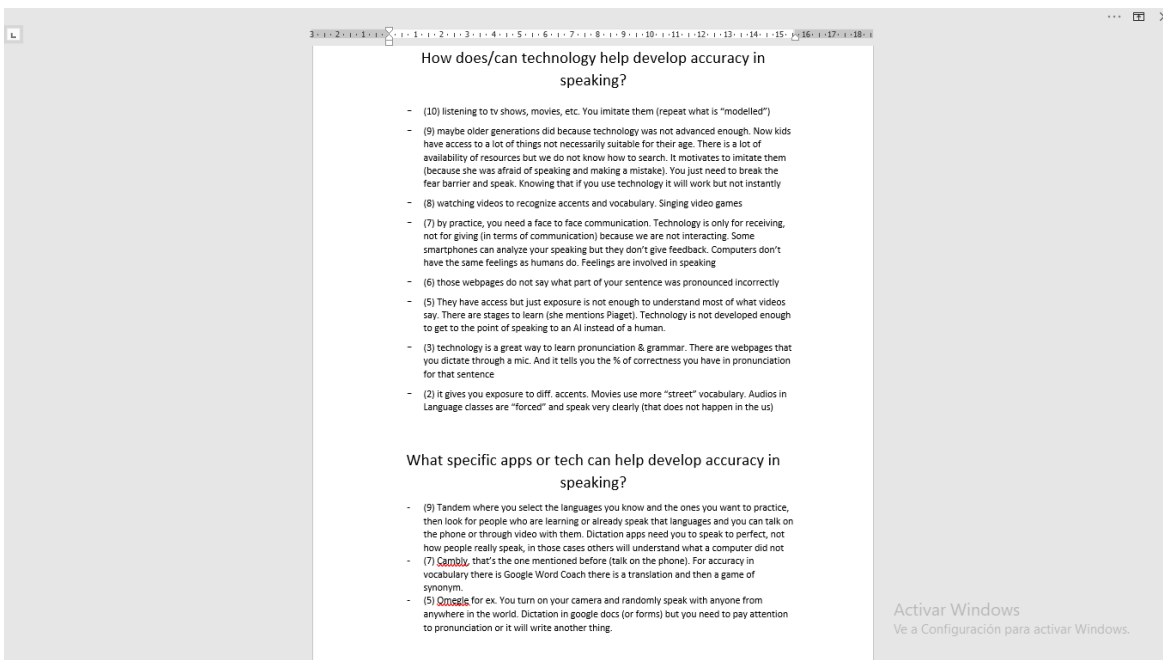
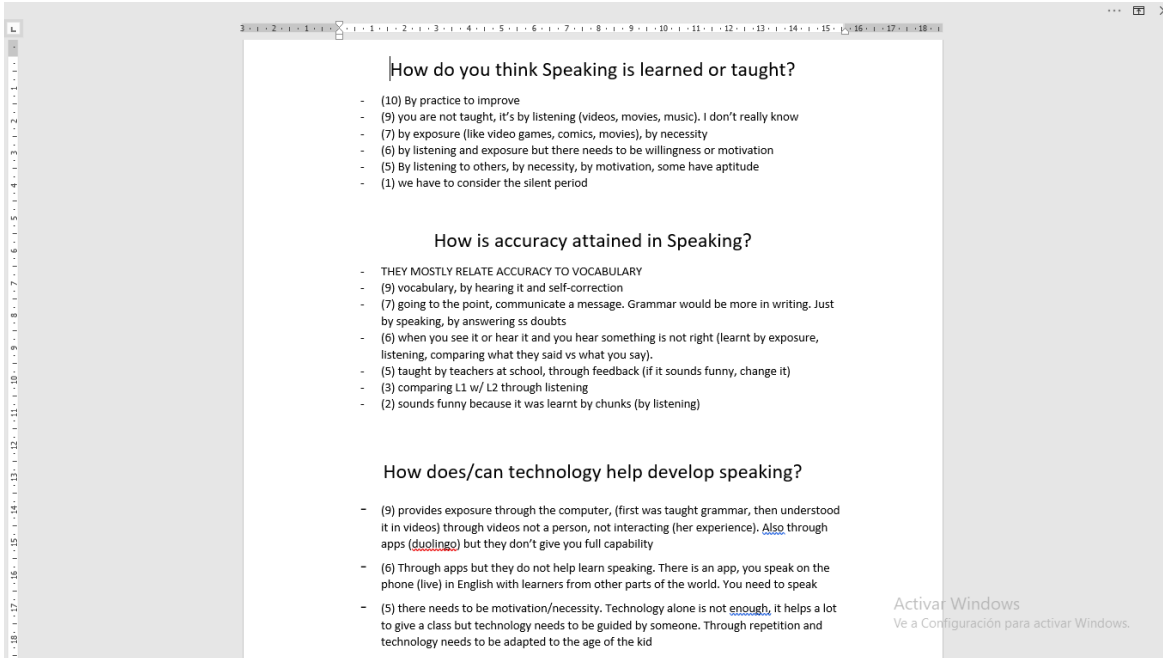
- 2.- Did you learn everything you expected to learn? Please explain.

- 3.- What did you learn from this project that you did not expect to learn?

- 4.- What did you enjoy/not enjoy in this project?

- 5.- What will you take away with you from this project?

Appendix P Focus Group data analysis by frequency



3 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |

- (4) ELSA voice recognition. (It's the page of voice recognition mentioned earlier)
- (3) In Elsa, after you speak, you can hear the correct pronunciation
- (1) Merriam webster online because you can play some games to improve on synonyms

Is it possible to develop speaking in an online environment?

- (9) It is possible, yes we are all different, but for some people it is possible.
- (5) It is possible, but at what level? If you want an advanced level, you need a teacher. The information doesn't stick, it is very easy to get distracted. But for some people it works because we are all different

Can a teacher have a predominant role depending on what (s)he does with technology?

- (9) motivation and attitude are very important or else teachers efforts might go in vain. Although negative house environments can affect the usage of technology, you can use it in school designated areas, cyber centers, etc.
- (7) I know a person who learns from videos and then just came to class to perfect it. So, if you have the ability and motivation, you will. A teacher can help by motivating the online learner (but does not have that much influence), it's more the student's motivation to learn than the teacher to teach.
- (6) also discipline has a great influence
- (5) everything they said is important but you also need a good environment to learn. That's why I prefer school, because of the environment. Many kids have tough environments not conducive to learning. There is no human connection online. Online learning is a good idea for people with a good economic status. Though having additional infrastructure from schools is helpful.
- (3) I know people who have my same level and learnt by imitating Youtube videos. I don't know if she learnt faster

Can forums assist in the development of speaking?

- MOST OF THEM AGREE
- (9) maybe writing and vocabulary but not pronunciation because you are not hearing anything
- (8) in facebook there are discussions (of movie scenes for instance) where people participate a lot. That is what we need in class to participate. School activities are very monotonous

Activar Windows
Ve a Configuración para activar Windows.

3 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |

- (1) in forums I usually give an opinion because I need a grade (not like I feel I will get better at something). Most of the cases we all write the same but with "I agree with you (or similar)" in the beginning.

What affects forums then is the design of the activities?

- (9) It is the fact that you feel you need to do it, it's not "I want to"
- (6) the topics need to get to you. But again, it's not for speaking, only for writing
- (5) Yes
- (1) the same, it helps writing, maybe vocabulary but not speaking. They have a lot of potential but teachers don't use them as they should be used.

When using Whatsapp for ex. Do you always only type?

- ALL: STICKERS, VOICE NOTES
- (9) I use voice notes but mostly when walking because I cannot use my phone correctly. Voice notes are inconvenient because we don't know if people can hear them, they might be busy. If you have the time, it's better to call. For gossip or this type of messages you really need to show emotion, writing does not work
- (7) when I am busy, I dictate to the phone and then I correct what was typed wrong, and then I send it. I also use voice notes, but I prefer dictation because I can erase ideas or if I don't like something I can just start another idea. In voice notes I have to erase the whole voice note (not the specific idea). If I could change ideas in voice notes, I would use it. Considering what #6 mentioned, it is more accurate to send a voice note because of how emotions are conveyed, you express more talking than writing but for me, dictation is more practical. Voice connects better.
- (6) I think the opposite, voice notes are more convenient because you can listen to yourself and analyze how others interpret the messages. I do not use dictation because it writes something else. The stress and emphasis of the words are very important because they express my emotions at the moment
- (5) I hate listening to anyone, I don't call people, not even my mom, I don't do anything with voice because I do not have time. If I want to talk to someone, I look for them in person. But I would say that voice messages are excellent for practice
- (1) it depends on the person and context where you are to see if voice notes, dictation or writing is the best option but its good to have options. I prefer typing because when I receive voice notes, I am listening to music.

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

What activities through technology do you think could be most effective to develop speaking?

- (9) calling people on the phone, video conferencing. That's the only way to get interaction, maybe voice notes, but I don't see the full work
- (7) the most important is to communicate
- (6) videos where they explain common mistakes

What is the benefit from doing actvs synchronously or through voice notes?

- (9) the real time, because it is instantly. Voice notes could take hours for smg to answer to you. And usually answers are very specific, or only to reply to your question, and there is no immediate feedback
- (6) I think the opposite, with voice notes you can take your time to listen to them (when you have time)

What benefit would voice notes have if I can do them, then hear them, and then send them?

- (10) You can see your mistakes and improve them, I can delete it and start over. In that case, I think it is a good idea.
- (9) if you make grammar mistakes, you can fix them before sending
- (8) I think voice notes that you can fix before sending is very convenient because you can analyze and then eliminate or add (the mistakes). It will be useful, but I think instant feedback is more convenient, it can be used but more occasionally.
- (7) I think synchronous communication is better because you learn instantly and you develop speaking (because in mistakes you develop learning), you self-correct or receive instant feedback from your interlocutor.

What actvs can you think of for both: asynchronous & voice notes?

- (10) maybe forums where you don't type. Maybe through the camera or skype. But with a specific topic.
- (9) AZMUN (Arizona Model United Nation) committees are created and discussions are held. It helps being with native speakers as you can see the model. Maybe live forum, put people in front of computers and give them a topic

Activar Windows
Ve a Configuración para activar Windows.

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

- (1) work with problem-based learning, form groups and have them solve them (discuss causes and what happens after the problem) but you pose the whole problem through voice notes

What's a good time for these types of actvs. to be developed?

- (9) if it doesn't affect us, then it can take as long as needed

Would you prefer text, voice or video forums?

- (9) I would prefer video for developing speaking because you can see body language and understand a bit better what's happening
- (6) text because maybe you don't have time to listen to the notes and I like reading. Or if I listen to someone, I need to take notes, so in writing would be much easier but if I wanted to develop speaking I would still like typing or video because you can see the way people articulate, etc.

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Appendix Q Permission by University Gatekeeper



UNIVERSIDAD DE SONORA

División de Humanidades y Bellas Artes

Departamento de Lenguas Extranjeras

August 16th, 2019

**Subject: Letter of Authorization to Conduct Research at the Foreign Languages
Department of the University of Sonora**

To whom it may concern,

This letter will serve as authorization for Gabriel Francisco León Fontes, a PhD student from the Department of Modern Languages at the University of Southampton to conduct a study on on-line discussion fora at the B.A. in English Language Teaching at the Foreign Languages Department of the University of Sonora.

If we have any concerns or require additional information, we will contact the researcher directly or his dissertation supervisor, Dr. Vicky Wright.

Carla Michelle Gastélum Knight, M.Ed.
Head of Department




"El saber de mis hijos
hará mi grandeza"
DIVISION DE
HUMANIDADES Y
BELLAS ARTES
DEPARTAMENTO
DE LENGUAS
EXTRANJERAS

Appendix R CEFR qualitative features of spoken language

Appendix 3 – CEFR Table 3: Qualitative features of spoken language (expanded with phonology)

	RANGE	ACCURACY	FLUENCY	INTERACTION	COHERENCE	PHONOLOGY
C2	Shows great flexibility reformulating ideas in differing linguistic forms to convey finer shades of meaning precisely, to give emphasis, to differentiate and to eliminate ambiguity. Also has a good command of idiomatic expressions and colloquialisms.	Maintains consistent grammatical control of complex language, even while attention is otherwise engaged (e.g. in forward planning, in monitoring others' reactions).	Can express him/herself spontaneously at length with a natural colloquial flow, avoiding or backtracking around any difficulty so smoothly that the interlocutor is hardly aware of it.	Can interact with ease and skill, picking up and using non-verbal and intonational cues apparently effortlessly. Can interweave his/her contribution into the joint discourse with fully natural turntaking, referencing, allusion making etc.	Can create coherent and cohesive discourse making full and appropriate use of a variety of organisational patterns and a wide range of connectors and other cohesive devices.	Can employ the full range of phonological features in the target language with a high level of control – including prosodic features such as word and sentence stress, rhythm and intonation – so that the finer points of his/her message are clear and precise. Intelligibility is not affected in any way by features of accent that may be retained from other language(s).
C1	Has a good command of a broad range of language allowing him/her to select a formulation to express him/ herself clearly in an appropriate style on a wide range of general, academic, professional or leisure topics without having to restrict what he/she wants to say.	Consistently maintains a high degree of grammatical accuracy; errors are rare, difficult to spot and generally corrected when they do occur.	Can express him/herself fluently and spontaneously, almost effortlessly. Only a conceptually difficult subject can hinder a natural, smooth flow of language.	Can select a suitable phrase from a readily available range of discourse functions to preface his remarks in order to get or to keep the floor and to relate his/her own contributions skilfully to those of other speakers.	Can produce clear, smoothly flowing, well-structured speech, showing controlled use of organisational patterns, connectors and cohesive devices.	Can employ the full range of phonological features in the TL with sufficient control to ensure intelligibility throughout. Can articulate virtually all the sounds of the TL; some features of accent retained from other language(s) may be noticeable, but they do not affect intelligibility at all.
B2+						
B2	Has a sufficient range of language to be able to give clear descriptions, express viewpoints on most general topics, without much conspicuous searching for words, using some complex sentence forms to do so.	Shows a relatively high degree of grammatical control. Does not make errors which cause misunderstanding, and can correct most of his/her mistakes.	Can produce stretches of language with a fairly even tempo; although he/she can be hesitant as he or she searches for patterns and expressions, there are few noticeably long pauses.	Can initiate discourse, take his/her turn when appropriate and end conversation when he/she needs to, though he/she may not always do this elegantly. Can help the discussion along on familiar ground confirming comprehension, inviting others in, etc.	Can use a limited number of cohesive devices to link his/her utterances into clear, coherent discourse, though there may be some "jumpiness" in a long contribution.	Can generally use appropriate intonation, place stress correctly and articulate individual sounds clearly; accent tends to be influenced by other language(s) he/she speaks, but has little or no effect on intelligibility.
B1+						
B1	Has enough language to get by, with sufficient vocabulary to express him/herself with some hesitation and circumlocutions on topics such as family, hobbies and interests, work, travel, and current events.	Uses reasonably accurately a repertoire of frequently used "routines" and patterns associated with more predictable situations.	Can keep going comprehensibly, even though pausing for grammatical and lexical planning and repair is very evident, especially in longer stretches of free production.	Can initiate, maintain and close simple face-to-face conversation on topics that are familiar or of personal interest. Can repeat back part of what someone has said to confirm mutual understanding.	Can link a series of shorter, discrete simple elements into a connected, linear sequence of points.	Pronunciation is generally intelligible; can approximate intonation and stress at both utterance and word levels. However, accent is usually influenced by other language(s) he/she speaks.
A2+						
A2	Uses basic sentence patterns with memorised phrases, groups of a few words and formulae in order to communicate limited information in simple everyday situations.	Uses some simple structures correctly, but still systematically makes basic mistakes.	Can make him/herself understood in very short utterances, even though pauses, false starts and reformulation are very evident.	Can ask and answer questions and respond to simple statements. Can indicate when he/she is following but is rarely able to understand enough to keep conversation going of his/her own accord.	Can link groups of words with simple connectors like "and", "but" and "because".	Pronunciation is generally clear enough to be understood, but conversational partners will need to ask for repetition from time to time. A strong influence from other language(s) he/she speaks on stress, rhythm and intonation may affect intelligibility, requiring collaboration from interlocutors. Nevertheless, pronunciation of familiar words is clear.
A1	Has a very basic repertoire of words and simple phrases related to personal details and particular concrete situations.	Shows only limited control of a few simple grammatical structures and sentence patterns in a memorised repertoire.	Can manage very short, isolated, mainly pre-packaged utterances, with much pausing to search for expressions, to articulate less familiar words, and to repair communication.	Can ask and answer questions about personal details. Can interact in a simple way but communication is totally dependent on repetition, rephrasing and repair.	Can link words or groups of words with very basic linear connectors like "and" or "then".	Pronunciation of a very limited repertoire of learnt words and phrases can be understood with some effort by interlocutors used to dealing with speakers of the language group concerned. Can reproduce correctly a limited range of sounds as well as the stress on simple, familiar words and phrases.

Appendix T CEFR to IELTS conversion table



The diagram shows a vertical bar representing the Common European Framework of Reference (CEFR) on the left, with three main categories: Proficient user (C2, C1), Independent user (B2, B1), and Basic user (A2, A1). To the right of this bar is a red, wavy-edged shape representing the IELTS scale, with scores ranging from 4 to 9. The word 'IELTS' is written vertically inside this red shape. The scores are aligned with the CEFR levels: 9 corresponds to C2, 8 to C1, 7.5 to B2, 7 to B1, 6.5 to B1, 6 to B1, 5.5 to B1, 5 to B1, 4.5 to B1, and 4 to A2.

Common European Framework of Reference (CEFR)	IELTS
Proficient user	
C2	9
C1	8
Independent user	
B2	7.5
B1	7
B1	6.5
B1	6
B1	5.5
B1	5
B1	4.5
Basic user	
A2	4

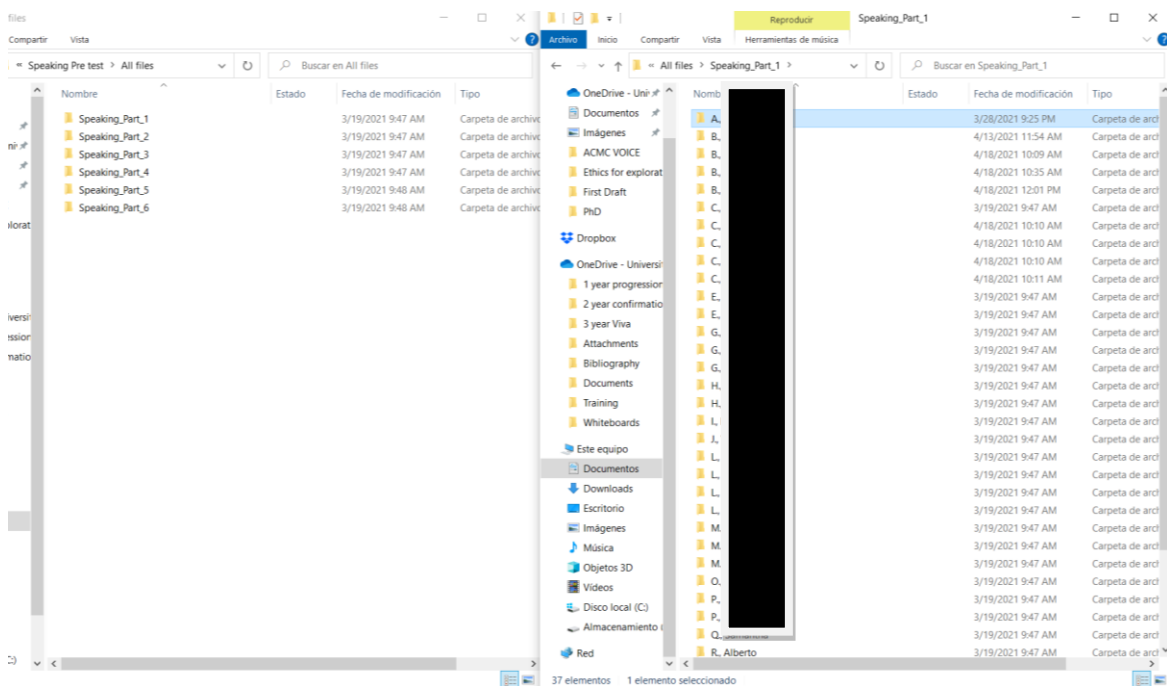
Retrieved from: <https://www.ielts.org/about-ielts/ielts-in-cefr-scale>

Appendix U Change in score between pre and post tests

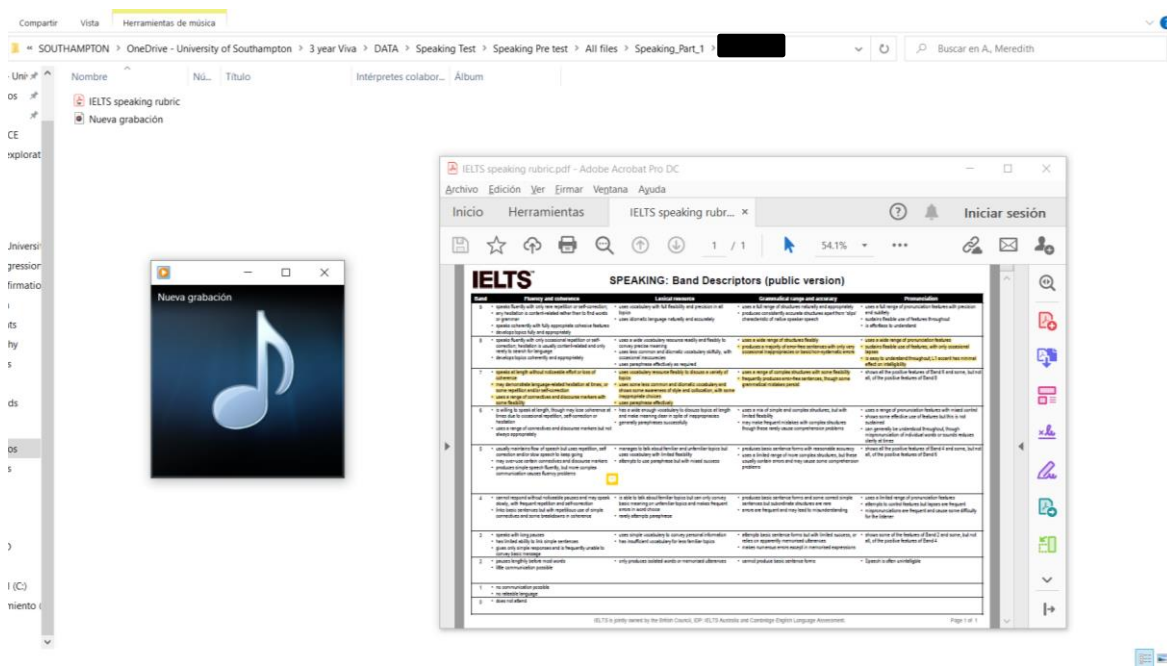
	PRE	POST	
Participant			
S29	7.5	7.5	1 same
S7	7.5	7.0	1 0.5 down
S3	7.0		1 did not submit
S37	7	6.5	1 0.5 down
S16	6.5	6.0	
S20	6.5		1 did not submit
S6	6.5	6.5	3 same
S8	6.5	6.5	1 0.5 down
S9	6.5	6.5	
S1	6.0	6.0	
S10	6.0	6.5	
S11	6.0	6.0	5 same
S12	6.0	5.5	8 0.5 up
S13	6.0	6.5	2 0.5 down
S14	6.0	6.5	
S15	6.0	6.5	
S17	6.0	6.0	
S2	6.0	6.0	
S26	6.0	6.5	
S31	6.0	5.5	
S34	6.0	6.5	
S36	6	6.5	
S4	6.0	6.0	
S5	6.0	6.5	
S18	5.5	5.5	
S19	5.5	5.5	
S21	5.5	6.0	
S23	5.5	6.0	4 0.5 up
S24	5.5	5.5	6 same
S27	5.5	5.5	
S30	5.5	6.0	
S32	5.5	5.5	
S33	5.5	6.0	
S35	5.5	5.5	
S25	5.0	5.0	1 0.5 up
S28	5.0	5.5	1 same

Appendix V Audio files organized by researcher

Audio files organized by pre/post test, then by speaking part (1+6) and finally by participant

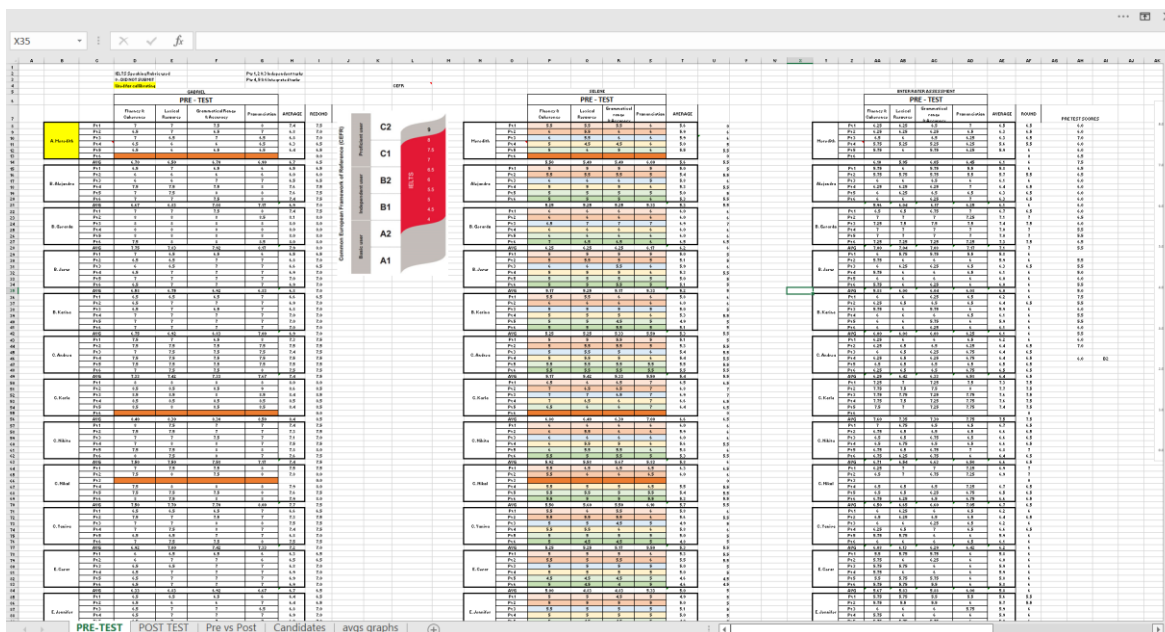


File uploaded for pre-test part 1 by a participant with its corresponding rubric

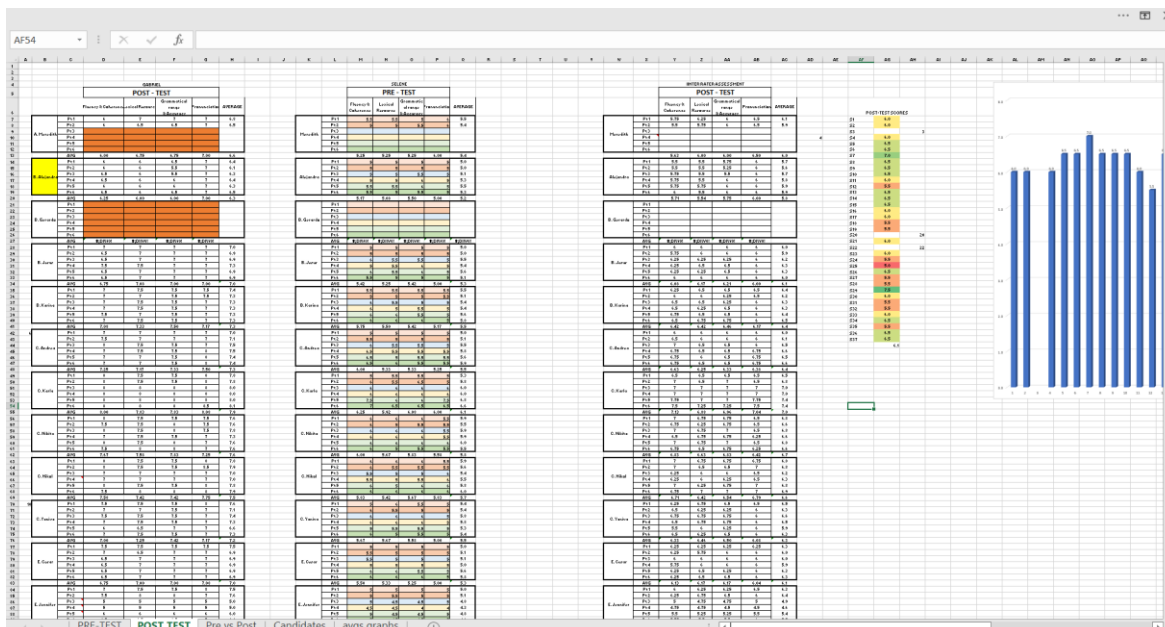


Appendix W Pre and post test scores by raters

Pre test scores by raters



Post test scores by raters



Appendix X Course final reflection



UNIVERSIDAD DE SONORA
FACULTY OF FINE ARTS AND HUMANITIES
DEPARTMENT OF FOREIGN LANGUAGES
BACHELOR OF ARTS IN ENGLISH LANGUAGE TEACHING
ENGLISH IV

Teacher: Gabriel Francisco Leon Fontes
 Fall Semester of 2019
 Student: _____

OVERVIEW

We have reached the end of this course and part of being a good teacher is being able to reflect on the things we do well and the things we do not. In order to do this, complete a learning reflection for this course based on the questions below (any aspect that you would like to add that is not in the questions is more than welcome).

This learning reflection will be organized by the aspects practiced in this course (listening, speaking, writing, reading, teaching sessions, grammar, etc.). To perform your reflection, I will ask you to access your grades in Schoology and look at your previous work (open your first work of each section, then the second, and so on) so as to analyze if there has been a change in the work you have been doing. For example, if you have to reflect on your writing, open your reading reports (first your first report, then read your second, then your third, your fourth and the final essay) and try to see if there is a difference between your first reports and your last reports.

PERSONAL REFLECTION:

Can you explain a little how and where you learned English since you were a child up to the beginning of this course?

When did you feel more motivated or less motivated to study?
 Did you contribute voluntarily in your English classes? Why (not)?

What are the main differences between you as a language student in the past (before enrolling in Uni) and you as a language student now?

READING:

In order to develop your reading skills for this course, 2 main things were designed, a) the reading of academic journals, and b) TOEFL-like reading practices.

To what extent do you think these activities helped you improve your reading skills in any way during this course?

1

2



TEACHING OF GRAMMAR

In order to develop your grammar teaching skills in this course, there were a series of activities designed, the first one was presenting the PPP approach to teaching English (as extra actus. The TTT approach and the TBL method were also presented). Then, there was a lesson planning practice using the PPP approach, and finally there was the teaching of 15-minute classes to your classmates where you practiced your pedagogical expertise and received feedback for it.

Do you feel these activities helped you improve your grammar teaching skills or control (use) in any way during this course? Why or why not?

GENERAL OPINION ON THIS COURSE

In general, what is your opinion of this course as a whole, what did you like, what did you not like, and what do you think can be improved?

Thank you for all your comments, they will be used to improve the learning experience of other students like you!

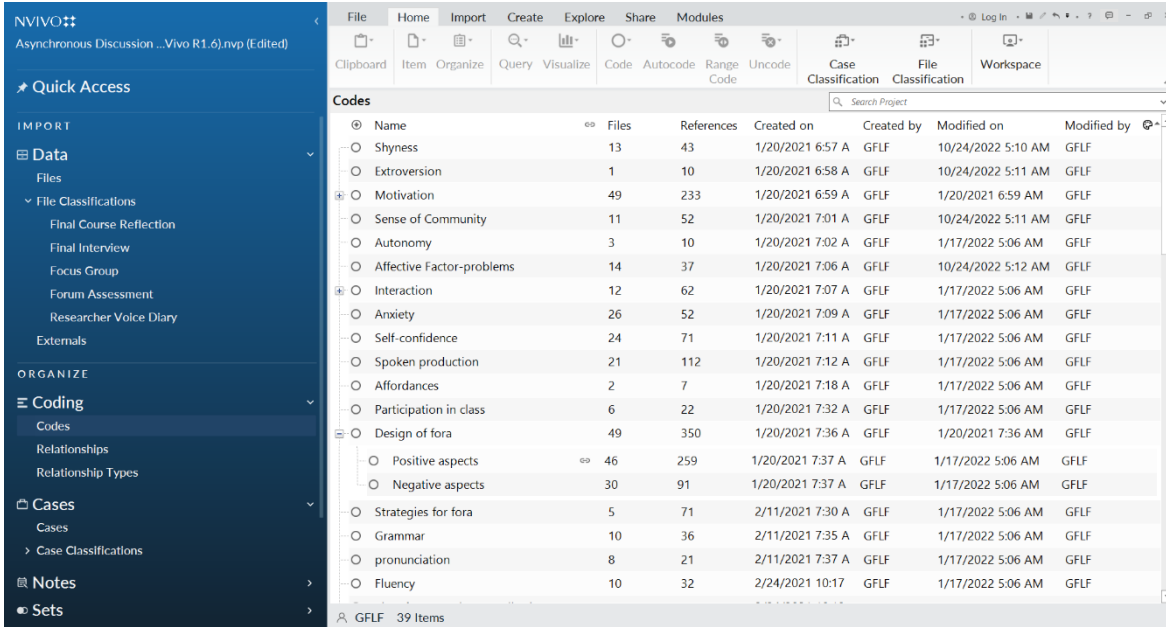
Gabriel



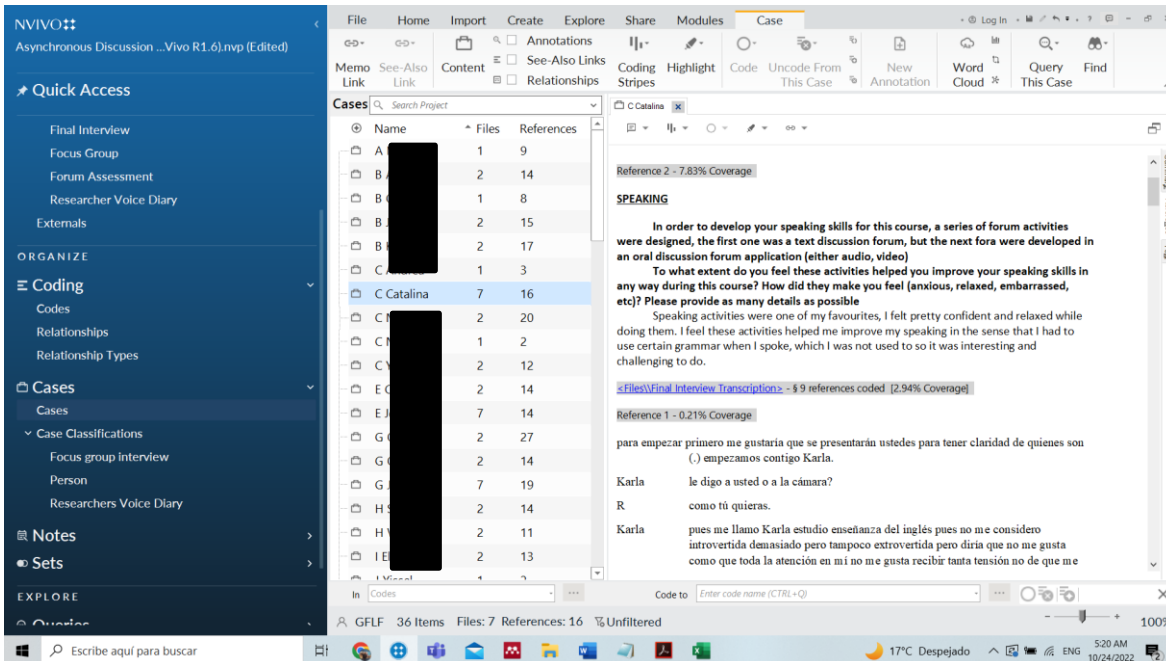
3

Appendix Y Nvivo file and code classifications

Data organization and code classification in Nvivo



Final Nvivo case report by participant



Appendix Z Strategies for limited contribution factors

Table 3.1 Summary of empirically based strategies

Limited contribution factors	Strategies
Not seeing the need for online discussion	<p>Select discussion topics directly related to students' main curriculum (Guzdial and Turns 2000; Masters and Oberprieler 2004).</p> <p>Make online discussion activity mandatory or give incentives (e.g., grades) for participation (Cifuentes et al. 1997; Dennen 2005; Gilbert and Daggagh 2005; Khan 2005; Oliver and Shaw 2003; Yeh and Buskirk 2005). Also give the online discussion some added value. E.g., post some learning resources such as websites directly related to the main curriculum; however, these resources are not available elsewhere (Hummel et al. 2005a; Oliver and Shaw 2003).</p> <p>Give students clear explanation of the purpose of the online discussion, as well as instructor expectations (Jung et al. 2002; Yeh and Buskirk 2005).</p> <p>Use deadlines or limited time frames for participation (Gilbert and Dabbagh 2005; Kienle and Ritterskamp 2007).</p> <p>Use discussion activities that can directly engage students' personal interests and emotions (Skinner 2009).</p>
Behavior/practice of instructor or other participants (e.g., lack of peer response, lack of instructor response, tone of postings—threatening, pontification on the part of others)	<p>Tutor's involvement in the discussion (Tagg and Dickinson 1995).</p> <p>Use of ground rules (Cheung and Hew 2007).</p>
Personality traits	<p>Combine high- and low-profile students in the same group (Chen and Caropreso 2004)</p>
Feeling lost in the discussion or information overload	<p>Use AOD forums that represent thread links visually to the user rather than representing messages as a list of message headers (Kear 2001; Kear and Heap 2007).</p> <p>Use ground rules to restrict students to post one idea per message posting (Cheung and Hew 2007).</p>
Not knowing what to contribute	<p>Ask open-ended questions where there are no obvious right or wrong answers (Dysthe 2002; Poscente and Fahy 2003). Also pose questions that invite every learner to share their own personal point of view (Dennen 2005; Dysthe 2002).</p> <p>Use sentence openers and message labels such as clarification/elaboration questions, counter arguments, context- or perspective-oriented questions (Choi et al. 2005).</p>

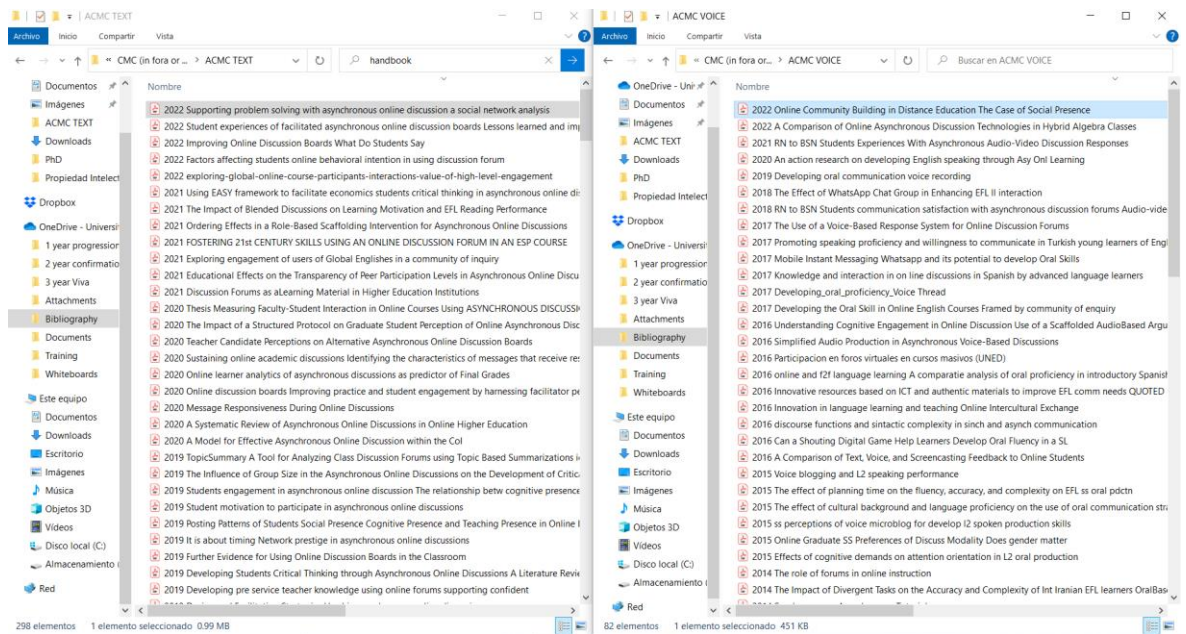
(continued)

Table 3.1 (continued)

Limited contribution factors	Strategies
Exhibiting surface level thinking	<p>Teach and model the use of Socratic questioning to enhance students' critical thinking skills (Yang et al. 2005, 2008).</p> <p>Use of De Bono's six thinking hats (Schellens et al. 2009).</p> <p>Facilitators to build on participants' ideas, by providing their own opinions, as well as new perspectives to examine these ideas. Also use a variety of questions, including Socratic questions, throughout the whole discussion (Hew et al. 2010a).</p> <p>Instructor to take a neutral stance on controversial topics (Arend 2009).</p> <p>Use of anonymity (Cheung et al. 2009).</p>
Exhibiting low level knowledge construction	<p>Use instructor facilitation techniques such as (a) identify areas of agreement/disagreement, (b) seek to reach consensus (negotiation), (c) encourage, acknowledge, student contributions, (d) focus the discussion on specific issues, and (e) diagnose misconceptions (Lu and Jeng 2006).</p> <p>Assign students the role of summarizer (Schellens et al. 2005).</p> <p>Match discussion tasks to students' available knowledge base (Schellens et al. 2005).</p> <p>Explicitly structure knowledge construction processes to favor the emergence of higher level interactions either through tools such as scripts/coercion or pedagogical models (Beers et al. 2005; Koh et al. 2010).</p>
Technical aspects	<p>Adequate technological preparation (Cifuentes et al. 1997).</p> <p>Use easy navigation functions (Xie et al. 2006).</p>
Lack of time	<p>As of now no clear empirically based strategy is found.</p>
Risk of being misunderstood	<p>Use audio-based discussion (McIntosh et al. 2003).</p>

Retrieved from Hew & Cheung, (2012: 32-33)

Appendix AA Folder with articles related to text-based discussion forums and voice-based discussion forums



Appendix BB Excel Spreadsheets with literature from voice and text-based AoD forums

Review of text-based AoD forum literature

Tabla concentradora de artículos text ACMC - Excel						Gabriel Leon	
Archivo Inicio Insertar Disposición de página Fórmulas Datos Revisar Vista Ayuda Acrobat ¿Qué desea hacer?							
A1 Year & Name of article							
A	B	C	D	E	F	G	H
Year & Name of article	No of Participants & where	Research Instruments	Type of methodology (mixed, qualitative, quantitative, experimental, etc.)	Results	Suggestions or Conclusions	Limitations if any	
2022, Improving Online Discussion Boards: What Do Students Say?	207 open-ended responses	student evaluations and semi-structured interviews	Qualitative. This study was a retrospective study using a report factor data.	The analysis of the course evaluations and student interviews brought forward the following five concepts: 1) students understood and validated the importance of class discussions; 2) traditional discussion boards lacked authenticity in comparison to face-to-face discussions; 3) discussion boards seemed repetitive; 4) students wanted to ask questions; and 5) students felt having choices embedded in discussion boards. The student evaluations asked two questions regarding student experience with remote learning. The first question: "Following the transition to remote learning, what would you do for your first course?" had 153 responses from students enrolled in discussion boards or class discussions. The second question: "What, specifically, would you suggest the instructor change if he/she were to teach the class again remotely in the future?" had 153 responses from students enrolled in discussion boards or class discussions. In the student interviews, nine out of the 10 interviews specifically asked about the use of discussion boards during remote learning; however, all 10 interviews mentioned wanting more social or cognitive interaction with peers.	Discussion boards have been a longtime, integral element of asynchronous online courses. When done well, they embody the three components of the Community of Inquiry model with instructor, social, and cognitive interaction. Disruptive events, like the COVID-19 health emergency and instructor expertise beyond course expertise, shook up discussion boards. As a direct result, this study explored the structure of discussion boards through the student lens during remote learning, concluding that there are various student design and traditional discussion boards, and revealed strategies for more enhanced social and cognitive presence. Discussion strategies like the one identified in this paper, should address student dissatisfaction with online discussions by providing relevant and meaningful insights. Insights emerged from this study. Further research focused on student perception of discussion boards in traditional asynchronous online courses could help expand the findings of this study, exploring the effectiveness of the suggested strategies on cognitive interaction, student satisfaction, and student engagement.	Several limitations of this research should be acknowledged. First, as a quantitative or intensive quantitative to specifically investigate student experience researchers' observations during the student interviews. Some follow-up (DICE) data was gathered for online discussion boards for this study. Secondly, this data was collected after students' early and mid-level of remote learning at the end of their semester. Given that their learning experience of remote learning may have evolved as their semester progresses, future research may have explored an earlier semester's prior experience with online learning were not explored. Expect perceptions of a remote learning experience. Their opinions of online dis	
2021, Educational Effects on the Transpacing of Peer Participation Levels in Asynchronous Online Discussion Activities	62, South Korea	tests	Experimental, quantitative	A Learner Usability of the Two Types of Participation Dashboards: This research indicates that the learner's perceived learnability, efficiency, and effectiveness were similar for the two types of participation dashboards, but learner in the Private group were more satisfied with the PPD. B. Learner Online Participation and Discussion Quality: In other words, although the PPD promotes quantitative participation in online discussion activities, it was not found to improve the quality of discussions. C. Perceived Learning Outcomes: This confirmed that learners perceive similar levels of satisfaction, learning, and interaction with peers regardless of the type of dashboard they use. D. Learner Feedback About the Two Types of Participation Dashboards: Learners also received the	The Transpacing group, which received the PPD (with the transpacing design decision), was found to be more active in online discussions but reported more peer affective ratings than the Private group, which received the PPD (with the private design decision). This study suggests that dashboards for promoting learner competitiveness may allow learners' behavioral aspects but may also have a negative impact on their emotions. The results of this study indicate that dashboards should be designed by accounting for their impact on learners' emotions as well as behavioral and cognitive aspects.	This study analyzed the effects of two types of participation dashboards, and explored through a quantitative research methodology. In future research, through a qualitative research methodology. A previous study has reported gender and dashboard presentation method (DPI). In this context, it is need the characteristics of learner and their learning environments. In addition, the research design of this study was limited to a specific time period (2 months) for the learning and evaluating the CT skills of students. To determine success factors of students in different conditions (one group) is limited to provide more specific information on student's critical thinking in asynchronous, while in the present study was not limited to small sample size within a specific	
2021, Using EASY Framework to Facilitate Economic Students' Critical Thinking in Asynchronous Online Discussions	31, Malaysia (EJIP)	messages, transcripts	Mixed (case studies)	The results indicate that students' thinking level was mostly based on the De (relativist) and L (relativist) categories. This followed the category of (No knowing) and L (liking). In contrast, the number of messages related to the categories such as P (knowing) and C (critical) categories were rarely observed in the online posting.	In the role-based online learning intervention presented in this study, the effects of role order were found to be small - especially the content of the large impact of the intervention in improving students' contributions according to the separate measures of depth and quality. This suggests that future work should be confident in assigning content roles and locating them between students, without being afraid that a particular ordering might be disadvantageous. Since the discussion task in the present study was relatively short in duration, future work should look at behaviour over the longer term, and in particular at examples where students' roles are similar (e.g. task order). A novel idea is to evaluate the content of the role order.	The first limitation is that the short time period (2 months) for the learning and evaluating the CT skills of students. To determine success factors of students in different conditions (one group) is limited to provide more specific information on student's critical thinking in asynchronous, while in the present study was not limited to small sample size within a specific	
2021, Enduring Effects in a Role-Based Scaffolded Intervention for Asynchronous Online Discussions?	78 spous, K's not open online	messages tasks	Network analysis approach	The analysis confirmed that the contributions made via the student via the "expert role scored significantly higher for both content, but found that the order in which students took on each role had little impact on the quality of their contributions to their threads. This result contrasts with earlier work on single-day roles that found an advantage in being assigned to the role early in the discussion, and suggests that instructors should feel confident to rotate more complex user roles between students.	The study demonstrated that the potential of ODF as a convenient and flexible platform that is able to promote linguistic improvement among students through discussions and knowledge sharing relative to the assigned group task. The non-participating learning and the comparative assignment of the group discussion experience also supported active student role progression to express their opinions consistently.	N/A	
2021, FOSTERING 21st CENTURY SKILLS USING AN ONLINE DISCUSSION FORUM IN AN ENGLISH FOR SPECIFIC PURPOSE COURSE	26, Malaysia	forums, interviews, discussions	Mixed (case studies)	Students valued the learning experience and perceived the ODF as beneficial in facilitating English language learning as well as fostering 21st century skills. The positive impact on English language learning was related to students' linguistic attainment. However, flexibility for reference for documentation, confidence storage and discussion provision were identified as factors that influenced the students' optimistic views on the use of the ODF. The students also felt the online environment as an intuitive venue for developing critical thinking, learning, decision management and digital skills.	The study demonstrated the potential of ODF as a convenient and flexible platform that is able to promote linguistic improvement among students through discussions and knowledge sharing relative to the assigned group task. The non-participating learning and the comparative assignment of the group discussion experience also supported active student role progression to express their opinions consistently.	N/A	
2021, Exploring engagement of users of Global English in a community of inquiry	26, Malaysia	col surveys and discussions	Mixed	In other words, Teaching Presence distributed to peers, results in the construction of knowledge (Cognitive Presence) which is promoted by the practice of Social Presence. All three Presences work in tandem. It is therefore important to recognize the practice of all three Presences in the classroom, whether online, hybrid or face-to-face. In doing so, an action oriented through the learner role leads to the collaborative construction of knowledge.	Findings suggest that the ODF can be used to enhance students' knowledge collaboration in the ODF and that the user can understand which domain they are most interested in. This study makes an empirical contribution to the body of research on ODF users and a functioning ODF asynchronous discussion boards. Additionally, it highlights the importance and potential value of a consensus, engagement, and social presence in ODF, as well as the importance of the ODF in the context of asynchronous learning.	N/A	
2020, Measuring Faculty Student Interaction in Online Courses Using Asynchronous Discussion Boards: A Campus-Wide Analysis (Discussion)	456 courses, Denver, CO	discussions	Mixed	Results from this study showed that instructor presence varies greatly from course to course. In some courses, instructors did not post at all during discussion, while in other courses, instructors posted over 200 times. On average, an instructor posted 23 times during the semester. Results from this study found that the frequency of student posts varied from zero to over two thousand in a course during the semester with a mean of 470 posts per course. Due to differences in class size, the average number of posts per student was calculated by dividing the total number of student posts by number of students in the class. Results from the study found that the most interaction occurred during the first two weeks of the semester. After the first week, interaction dropped sharply week by week.	The study demonstrated that the potential of ODF as a convenient and flexible platform that is able to promote linguistic improvement among students through discussions and knowledge sharing relative to the assigned group task. The non-participating learning and the comparative assignment of the group discussion experience also supported active student role progression to express their opinions consistently.	The generalization of this research to a larger audience is limited due to the study focus on a specific course. The actual learning environment was a common LMS Canvas. The actual learning environment was a common LMS Canvas. Another limitation is the data set used for this study was limited to students.	
2020, The Impact of a Structured Protocol on Graduate Student Perception of Online Asynchronous Discussions	95, SA, Carolina, GA	Questionnaire	Quantitative, Quasi-experimental	Results from the data analysis indicated that student perception of online asynchronous discussions improved when a structure was added. Results also showed a lower level of dissatisfaction when discussions were structured.	This study results indicate that student perception of online asynchronous discussion did improve when a structure was added to discussions with a specific statement of purpose, specific directions for participation modeled from the Final Word protocol, and a grading rubric. The structure from the Final Word protocol was used, and grading expectations were made clear to students. There was a statistically significant increase in student perception of the structure, "Class discussions and/or other activities helped me understand subject matter" among students who	This study was limited to a population of graduate students, so reports experienced students could represent the same matter. Additionally, a low discussion posts such as the Final Word might be used in a	
2020, Teacher Candidate Perceptions on Asynchronous Online Discussion Boards	77, MA, Anderson, NC	Surveys	Qualitative	Results indicate participants prefer Blackboard, Flipgrid, and video responses to traditional discussion boards. More specifically when evaluating for enhancing creativity, understanding, student voice, and usefulness a participant preferred Flipgrid.	This study will add to the current research on ODFs by helping faculty to increase the ODF. The participating teacher candidate responses indicate their overall preference toward the more alternative ODFs over traditional Flipgrid, Blackboard, and Blackboard over traditional ODF. Therefore, education preparation faculty could consider designing varied formats of ODF users and two face courses.	This study had a small sample size and participants in this study were gen	
Hoja1							
Lista Accesibilidad: es necesario investigar							

Review of voice-based AoD forum literature

Tabla concentradora de artículos voice ACMC - Excel						Gabriel Leon	
Archivo Inicio Insertar Disposición de página Fórmulas Datos Revisar Vista Ayuda Acrobat ¿Qué desea hacer?							
A68 2008, COMPUTER-MEDIATED COMMUNICATION IN FOREIGN LANGUAGE EDUCATION: Use of Target Language and Learner Perceptions							
A	B	C	D	E	F	G	H
Year & Name of article	Subject (psychology, CLT, professional domain)	No of Participants & where	Research Instruments	Type of methodology (qualitative, quantitative, experimental, etc.)	Results	Suggestions or Conclusions	Limitations if any
2008, Comparison of Social Presence in Voice-Based and Text-Based Asynchronous Computer Conferencing	Fluorology		Southern USA		Results reported higher levels of affective and communicative reinforcement interactions in the text-based asynchronous computer conference as a statistically significant level. Voice-based asynchronous computer conference showed lower levels of affective and communicative reinforcement interactions. This study also found that the use of voice-based asynchronous computer conference was more likely to be used by students who were more confident in their English language skills.	Deployment of voice-based technology as a pedagogical tool is delivered at a considerable cost to higher education institutions. These costs are often overlooked when evaluating the benefits of voice-based technology. According to this study, there is no apparent benefit in using voice-based rather than text-based asynchronous computer conferencing. However, the use of voice-based asynchronous computer conferencing may be a more effective way to increase student participation in asynchronous computer conferencing. This study also found that the use of voice-based asynchronous computer conference was more likely to be used by students who were more confident in their English language skills.	Yes, explained in the text (my entries are tabbed)
2008, CLIMATE-RELATED COMMUNICATION IN FOREIGN LANGUAGE EDUCATION: Use of Target Language and Learner Perceptions	EFL	60, Turkey	Questionnaire, tests log	I does not say, but probably mixed	Results from this study showed that students' perception of online asynchronous discussions improved when a structure was added. Results also showed a lower level of dissatisfaction when discussions were structured.	This study results indicate that student perception of online asynchronous discussion did improve when a structure was added to discussions with a specific statement of purpose, specific directions for participation modeled from the Final Word protocol, and a grading rubric. The structure from the Final Word protocol was used, and grading expectations were made clear to students. There was a statistically significant increase in student perception of the structure, "Class discussions and/or other activities helped me understand subject matter" among students who	None reported
2008, Effects of Asynchronous Discussion and Face-to-Face Discussion on Oral Production	English/Major	10, Japan	transcriptions	Mixed method	Results from this study showed that students' perception of online asynchronous discussions improved when a structure was added. Results also showed a lower level of dissatisfaction when discussions were structured.	This study will add to the current research on ODFs by helping faculty to increase the ODF. The participating teacher candidate responses indicate their overall preference toward the more alternative ODFs over traditional Flipgrid, Blackboard, and Blackboard over traditional ODF. Therefore, education preparation faculty could consider designing varied formats of ODF users and two face courses.	None reported
2007, Facilitating online discussions effectively	Design model discussion				Results from this study showed that students' perception of online asynchronous discussions improved when a structure was added. Results also showed a lower level of dissatisfaction when discussions were structured.	This study will add to the current research on ODFs by helping faculty to increase the ODF. The participating teacher candidate responses indicate their overall preference toward the more alternative ODFs over traditional Flipgrid, Blackboard, and Blackboard over traditional ODF. Therefore, education preparation faculty could consider designing varied formats of ODF users and two face courses.	None reported
2006, Science-taking and stance-taking in students' online forum discussion	EFL	102 forums	Posts	Mixed method	Results from this study showed that students' perception of online asynchronous discussions improved when a structure was added. Results also showed a lower level of dissatisfaction when discussions were structured.	This study will add to the current research on ODFs by helping faculty to increase the ODF. The participating teacher candidate responses indicate their overall preference toward the more alternative ODFs over traditional Flipgrid, Blackboard, and Blackboard over traditional ODF. Therefore, education preparation faculty could consider designing varied formats of ODF users and two face courses.	None reported
2006, Negotiation of Meaning and Noticing in Text-Based Online Chat	EFL	16, Persian/52	Tests	Quasi-experimental, mixed	Results from this study showed that students' perception of online asynchronous discussions improved when a structure was added. Results also showed a lower level of dissatisfaction when discussions were structured.	This study will add to the current research on ODFs by helping faculty to increase the ODF. The participating teacher candidate responses indicate their overall preference toward the more alternative ODFs over traditional Flipgrid, Blackboard, and Blackboard over traditional ODF. Therefore, education preparation faculty could consider designing varied formats of ODF users and two face courses.	None reported
2006, Analyzing Collaborative Interactions: Divergence, Shared Understanding and Construction of Knowledge	EFL	26	Discussions and essays	Quasi-experimental, mixed	Results from this study showed that students' perception of online asynchronous discussions improved when a structure was added. Results also showed a lower level of dissatisfaction when discussions were structured.	This study will add to the current research on ODFs by helping faculty to increase the ODF. The participating teacher candidate responses indicate their overall preference toward the more alternative ODFs over traditional Flipgrid, Blackboard, and Blackboard over traditional ODF. Therefore, education preparation faculty could consider designing varied formats of ODF users and two face courses.	None reported
2006, NETWORKED LEARNER EXPERIENCE DESIGN STRATEGIES: SITING SOCIAL NETWORKING MEDIA TO SUPPORT ONLINE LEARNING	Social media				Results from this study showed that students' perception of online asynchronous discussions improved when a structure was added. Results also showed a lower level of dissatisfaction when discussions were structured.	This study will add to the current research on ODFs by helping faculty to increase the ODF. The participating teacher candidate responses indicate their overall preference toward the more alternative ODFs over traditional Flipgrid, Blackboard, and Blackboard over traditional ODF. Therefore, education preparation faculty could consider designing varied formats of ODF users and two face courses.	None reported
2006, ANALYZING ORAL SKILLS IN VOICE & EAR AND ONLINE INTERVIEWS	SLA, Spanish	19	Interviews, Transcripts, a video, an electronic worksheet, etc.	Does not say, but probably quantitative	Results from this study showed that students' perception of online asynchronous discussions improved when a structure was added. Results also showed a lower level of dissatisfaction when discussions were structured.	This study will add to the current research on ODFs by helping faculty to increase the ODF. The participating teacher candidate responses indicate their overall preference toward the more alternative ODFs over traditional Flipgrid, Blackboard, and Blackboard over traditional ODF. Therefore, education preparation faculty could consider designing varied formats of ODF users and two face courses.	There are several areas of limitation within this study. The level of control of interview results, the nature of content of oral interaction, and the issues with technology to maintain a
2002, Theoretical perspectives and new practices in audio-graphic conferencing for language learning	Not a study, a discussion				Results from this study showed that students' perception of online asynchronous discussions improved when a structure was added. Results also showed a lower level of dissatisfaction when discussions were structured.	This study will add to the current research on ODFs by helping faculty to increase the ODF. The participating teacher candidate responses indicate their overall preference toward the more alternative ODFs over traditional Flipgrid, Blackboard, and Blackboard over traditional ODF. Therefore, education preparation faculty could consider designing varied formats of ODF users and two face courses.	None reported
2003, The Effect of Synchronous and Asynchronous CMC on Oral Performance in German	SLA, German	96, Midwestern University USA	discussions and transcripts	quasi-experimental	Results from this study showed that students' perception of online asynchronous discussions improved when a structure was added. Results also showed a lower level of dissatisfaction when discussions were structured.	This study will add to the current research on ODFs by helping faculty to increase the ODF. The participating teacher candidate responses indicate their overall preference toward the more alternative ODFs over traditional Flipgrid, Blackboard, and Blackboard over traditional ODF. Therefore, education preparation faculty could consider designing varied formats of ODF users and two face courses.	None reported
2003, Performance: Voice-A Personal Analysis	Not a study, a discussion				Results from this study showed that students' perception of online asynchronous discussions improved when a structure was added. Results also showed a lower level of dissatisfaction when discussions were structured.	This study will add to the current research on ODFs by helping faculty to increase the ODF. The participating teacher candidate responses indicate their overall preference toward the more alternative ODFs over traditional Flipgrid, Blackboard, and Blackboard over traditional ODF. Therefore, education preparation faculty could consider designing varied formats of ODF users and two face courses.	None reported
2003, A Case Study in Asynchronous Voice Conferencing for Language Learning	EAP	41, Alberta	Survey	Quantitative	Results from this study showed that students' perception of online asynchronous discussions improved when a structure was added. Results also showed a lower level of dissatisfaction when discussions were structured.	This study will add to the current research on ODFs by helping faculty to increase the ODF. The participating teacher candidate responses indicate their overall preference toward the more alternative ODFs over traditional Flipgrid, Blackboard, and Blackboard over traditional ODF. Therefore, education preparation faculty could consider designing varied formats of ODF users and two face courses.	None reported
2003, Conversations in Motion: Computer-mediated Communication in the Foreign Language Classroom	SLA, Finnish	41, does not say	Transcripts, notes, interviews, discussions, observations	Mixed	Results from this study showed that students' perception of online asynchronous discussions improved when a structure was added. Results also showed a lower level of dissatisfaction when discussions were structured.	This study will add to the current research on ODFs by helping faculty to increase the ODF. The participating teacher candidate responses indicate their overall preference toward the more alternative ODFs over traditional Flipgrid, Blackboard, and Blackboard over traditional ODF. Therefore, education preparation faculty could consider designing varied formats of ODF users and two face courses.	None reported
Hoja1							
Lista Accesibilidad: es necesario investigar							

Appendix CC Factors limiting student contribution in AoD forums Hew & Cheung, (2012: 16)

Table 2.1 Summary of the factors that limit student contribution

Factors	Studies (representative example)
Not seeing the need for online discussion	Dennen (2005), Fung (2004), Zhao and McDougall (2005), Oliver and Shaw (2003), Xie et al. (2006)
Behavior/practice of instructor or participants (e.g., tone of postings—threatening, pontification on the part of others, lack of peer response, lack of instructor response, single-pass strategy)	Bodzin and Park (2000), (Hew and Cheung 2003b,c), Hew et al. (2005), Hewitt and Teplovs (1999), Hewitt (2003; 2005), Jeong (2004), Oliver and Shaw (2003), Xie et al. (2006), Zhao and McDougall (2005), Zhu (2006).
Personality traits (e.g., low degrees of curiosity, extraversion, agreeableness, openness)	Chen and Caropreso (2004), Khan (2005), Oliver and Shaw (2003)
Difficulty in keeping up with the discussion	Cheung and Hew (2006), Jones et al. (2004), Kear (2001)
Not knowing what to contribute	Fung (2004), Hewitt (2005), Khan (2005)
Lack of critical thinking skills	Hew and Cheung (2003b), Cheung and Hew (2006), Khine et al. (2003)
Being content in merely answering queries (low-level knowledge construction)	Cheung and Hew (2006), Gunawardena et al. (1997), Quek (2010)
Technical aspects (e.g., usability issues)	Hummel et al. (2005b), Murphy and Coleman (2004)
Lack of time	Fung (2004), Hammond (1999), Gerbic (2006)
Risk of being misunderstood	Murphy and Coleman (2004), Yeh and Lahman (2007)

Appendix DD IELTS Rubric

IELTS™		SPEAKING: Band Descriptors (public version)			
Band	Fluency and coherence	Lexical resource	Grammatical range and accuracy	Pronunciation	
9	<ul style="list-style-type: none"> speaks fluently with only rare repetition or self-correction; any hesitation is content-related rather than to find words or grammar speaks coherently with fully appropriate cohesive features develops topics fully and appropriately 	<ul style="list-style-type: none"> uses vocabulary with full flexibility and precision in all topics uses idiomatic language naturally and accurately 	<ul style="list-style-type: none"> uses a full range of structures naturally and appropriately produces consistently accurate structures apart from 'slips' characteristic of native speaker speech 	<ul style="list-style-type: none"> uses a full range of pronunciation features with precision and subtlety sustains flexible use of features throughout is effortless to understand 	
8	<ul style="list-style-type: none"> speaks fluently with only occasional repetition or self-correction; hesitation is usually content-related and only rarely to search for language develops topics coherently and appropriately 	<ul style="list-style-type: none"> uses a wide vocabulary resource readily and flexibly to convey precise meaning uses less common and idiomatic vocabulary skillfully, with occasional inaccuracies uses paraphrase effectively as required 	<ul style="list-style-type: none"> uses a wide range of structures flexibly produces a majority of error-free sentences with only very occasional inappropriacies or basic/non-systematic errors 	<ul style="list-style-type: none"> uses a wide range of pronunciation features sustains flexible use of features, with only occasional lapses is easy to understand throughout, L1 accent has minimal effect on intelligibility 	
7	<ul style="list-style-type: none"> speaks at length without noticeable effort or loss of coherence may demonstrate language-related hesitation at times, or some repetition and/or self-correction uses a range of connectives and discourse markers with some flexibility 	<ul style="list-style-type: none"> uses vocabulary resource flexibly to discuss a variety of topics uses some less common and idiomatic vocabulary and shows some awareness of style and collocation, with some inappropriate choices uses paraphrase effectively 	<ul style="list-style-type: none"> uses a range of complex structures with some flexibility frequently produces error-free sentences, though some grammatical mistakes persist 	<ul style="list-style-type: none"> shows all the positive features of Band 6 and some, but not all, of the positive features of Band 8 	
6	<ul style="list-style-type: none"> is willing to speak at length, though may lose coherence at times due to occasional repetition, self-correction or hesitation uses a range of connectives and discourse markers but not always appropriately 	<ul style="list-style-type: none"> has a wide enough vocabulary to discuss topics at length and make meaning clear in spite of inappropriacies generally paraphrases successfully 	<ul style="list-style-type: none"> uses a mix of simple and complex structures, but with limited flexibility may make frequent mistakes with complex structures though these rarely cause comprehension problems 	<ul style="list-style-type: none"> uses a range of pronunciation features with mixed control shows some effective use of features but this is not sustained can generally be understood throughout, though mispronunciation of individual words or sounds reduces clarity at times 	
5	<ul style="list-style-type: none"> usually maintains flow of speech but uses repetition, self-correction and/or slow speech to keep going may over-use certain connectives and discourse markers produces simple speech fluently, but more complex communication causes fluency problems 	<ul style="list-style-type: none"> manages to talk about familiar and unfamiliar topics but uses vocabulary with limited flexibility attempts to use paraphrase but with mixed success 	<ul style="list-style-type: none"> produces basic sentence forms with reasonable accuracy uses a limited range of more complex structures, but these usually contain errors and may cause some comprehension problems 	<ul style="list-style-type: none"> shows all the positive features of Band 4 and some, but not all, of the positive features of Band 6 	
4	<ul style="list-style-type: none"> cannot respond without noticeable pauses and may speak slowly, with frequent repetition and self-correction links basic sentences but with repetitive use of simple connectives and some breakdowns in coherence 	<ul style="list-style-type: none"> is able to talk about familiar topics but can only convey basic meaning on unfamiliar topics and makes frequent errors in word choice rarely attempts paraphrase 	<ul style="list-style-type: none"> produces basic sentence forms and some correct simple sentences but subordinate structures are rare errors are frequent and may lead to misunderstanding 	<ul style="list-style-type: none"> uses a limited range of pronunciation features attempts to control features but lapses are frequent mispronunciations are frequent and cause some difficulty for the listener 	
3	<ul style="list-style-type: none"> speaks with long pauses has limited ability to link simple sentences gives only simple responses and is frequently unable to convey basic message 	<ul style="list-style-type: none"> uses simple vocabulary to convey personal information has insufficient vocabulary for less familiar topics 	<ul style="list-style-type: none"> attempts basic sentence forms but with limited success, or relies on apparently memorised utterances makes numerous errors except in memorised expressions 	<ul style="list-style-type: none"> shows some of the features of Band 2 and some, but not all, of the positive features of Band 4 	
2	<ul style="list-style-type: none"> pauses lengthily before most words little communication possible 	<ul style="list-style-type: none"> only produces isolated words or memorised utterances 	<ul style="list-style-type: none"> cannot produce basic sentence forms 	<ul style="list-style-type: none"> Speech is often unintelligible 	
1	<ul style="list-style-type: none"> no communication possible no rateable language 				
0	<ul style="list-style-type: none"> does not attend 				

IELTS is jointly owned by the British Council, IDP: IELTS Australia and Cambridge English Language Assessment.

Page 1 of 1

Retrieved from: <https://www.ielts.org/-/media/pdfs/speaking-band-descriptors.ashx?la=en>

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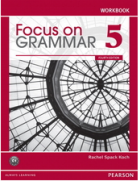
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Appendix GG Intervention pre test

schoolology UPGRADE COURSES GROUPS RESOURCES Gabriel Leon



Course Options

Materials

- Updates
- Gradebook
- Grade Setup
- Badges
- Attendance
- Members

Access Code
TM27-SW7W-56GP7
Reset

Information
English IV, from the BA in ELT at the Universidad de Sonora.
Grading period 2019-2 LEI
Location Universidad de Sonora, Hermosillo, Sonora
Meeting days Mon Tue Wed Thu Fri

2019-2 English IV: LEI

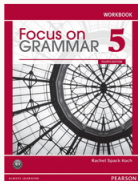
First Speaking Test (Diagnostic) Immersive Reader

Friday 23rd

Add Materials

- Speaking Part 1**
For this assignment, you will read the information in the picture, and listen to the audios to this assignment. After you have done so, you will record your answer (audio only) and will upload it ...
Due Friday, August 30, 2019 at 11:59 pm
- Speaking Part 2**
For this assignment, you will read the information in the picture, and listen to the audios to this assignment. After you have done so, you will record your answer (audio only) and will upload it ...
Due Friday, August 30, 2019 at 11:59 pm
- Speaking Part 3**
For this assignment, you will read the information in the pdf & picture, and listen to the audios attached to this assignment. After you have done so, you will record your answer (audio only) ...
Due Friday, August 30, 2019 at 11:59 pm
- Speaking Part 4**
For this assignment, you will read the information in the pdf & picture, and listen to the audios attached to this assignment. After you have done so, you will record your answer (audio only) ...
Due Friday, August 30, 2019 at 11:59 pm
- Speaking Part 5**
For this assignment, you will read the information in the pdf, and listen to the audios attached to this assignment. After you have done so, you will record your answer (audio only) and will ...
Due Friday, August 30, 2019 at 11:59 pm
- Speaking Part 6**
For this assignment, you will read the information in the pdf, and listen to the audios attached to this assignment. After you have done so, you will record your answer (audio only) and will ...
Due Friday, August 30, 2019 at 11:59 pm

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Course Options

Materials

- Updates
- Gradebook
- Grade Setup
- Badges
- Attendance
- Members

Access Code
TM27-SW7W-56GP7
Reset

Information
English IV, from the BA in ELT at the Universidad de Sonora.
Grading period 2019-2 LEI
Location Universidad de Sonora, Hermosillo, Sonora
Meeting days Mon Tue Wed Thu Fri

2019-2 English IV: LEI

First Speaking Test (Diagnostic) Immersive Reader

Speaking Part 1 Submissions Received (37/37)

Due: Friday, August 30, 2019 at 11:59 pm

For this assignment, you will read the information in the picture, and listen to the audios to this assignment. After you have done so, you will record your answer (audio only) and will upload it to this assignment.

*NOTE, you can record your audio in vocaroo (click here), or you can record your voice in the computer's voice recorder, save the file and then upload it. In both cases, please do not upload links, upload the actual files.

Posted Fri Aug 23, 2019 at 7:29 am

- 151P1.MP3 227 kB | VIEW
- 151P2.MP3 182 kB | VIEW
- 151P3.MP3 77 kB | VIEW
- 151P4.MP3 65 kB | VIEW

Comments

There are no comments

Write a comment

Post

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2019-20 English 10 LE1

1. Please listen carefully.

TOEFL Speaking Question 1 of 8

Describe changes in technology that have affected your life, and explain what effect they have had on you as a student. Include details and examples to support your explanation.

Preparation time: 15 seconds
Response time: 45 seconds

You may begin to prepare your response after the beep.
Please begin speaking after the beep.

[Download image](#)

Focus on GRAMMAR 5

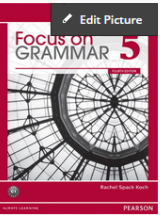
Course Options
Materials
Updates
Gradebook
Grade Setup
Badges
Attendance
Members

Access Code
TMRZ-5W7W-56277
View

Information

Reader
Received (37/37)

Appendix HH Intervention post test



Course Options

Materials

- Updates
- Gradebook
- Grade Setup
- Badges
- Attendance
- Members

Access Code
TM27-SW7W-S6GP7
Reset

Information

English IV, from the BA in ELT at the Universidad de Sonora.

Grading period
2019-2 LEI

Location
Universidad de Sonora, Hermosillo, Sonora

Meeting days
Mon Tue Wed Thu Fri

2019-2 English IV: LEI

Second Speaking Test

Dec 3rd

Immersive Reader

Add Materials

Speaking Part 1 ⚙

For this assignment, you will read the information in the picture, and listen to the audios to this assignment. After you have done so, you will record your answer (audio only) and will upload it ...

- Due Tuesday, December 3, 2019 at 11:59 pm

Speaking Part 2 ⚙

For this assignment, you will read the information in the picture, and listen to the audios to this assignment. After you have done so, you will record your answer (audio only) and will upload it ...

- Due Tuesday, December 3, 2019 at 11:00 pm

Speaking Part 3 ⚙

For this assignment, you will read the information in the pdf & picture, and listen to the audios attached to this assignment. After you have done so, you will record your answer (audio only) ...

- Due Tuesday, December 3, 2019 at 11:59 pm

Speaking Part 4 ⚙

For this assignment, you will read the information in the pdf & picture, and listen to the audios attached to this assignment. After you have done so, you will record your answer (audio only) ...

- Due Tuesday, December 3, 2019 at 11:59 pm

Speaking Part 5 ⚙

For this assignment, you will read the information in the pdf, and listen to the audios attached to this assignment. After you have done so, you will record your answer (audio only) and will ...

- Due Tuesday, December 3, 2019 at 11:59 pm

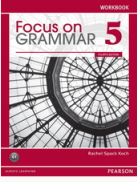
Speaking Part 6 ⚙

For this assignment, you will read the information in the pdf, and listen to the audios attached to this assignment. After you have done so, you will record your answer (audio only) and will ...

- Due Tuesday, December 3, 2019 at 11:59 pm

S schoology UPGRADE COURSES GROUPS RESOURCES

🔍 📅 ✉️ 🔔 👤 Gabriel Leon



Course Options

Materials

- Updates
- Gradebook
- Grade Setup
- Badges
- Attendance
- Members

Access Code
TM27-SW7W-S6GP7
Reset

Information

English IV, from the BA in ELT at the Universidad de Sonora.

Grading period
2019-2 LEI

Location
Universidad de Sonora, Hermosillo, Sonora

Meeting days
Mon Tue Wed Thu Fri

2019-2 English IV: LEI

Second Speaking Test

Speaking Part 4 Immersive Reader

Due: Tuesday, December 3, 2019 at 11:59 pm

For this assignment, you will read the information in the pdf & picture, and listen to the audios attached to this assignment.

After you have done so, you will record your answer (audio only) and will upload it to this assignment.

*NOTE, you can record your audio in vocaroo (click here), or you can record your voice in the computer's voice recorder, save the file and then upload it. In both cases, please do not upload links, upload the actual files.

Posted Tue Dec 3, 2019 at 7:48 pm

- 454P1.MP3 387 KB | [VIEW](#)
- 454P2.MP3 142 KB | [VIEW](#)
- 454P3.MP3 2 MB | [VIEW](#)
- 454P5.MP3 167 KB | [VIEW](#)
- 454P6.MP3 79 KB | [VIEW](#)
- 454P7.MP3 64 KB | [VIEW](#)
- Speaking test pt 4 pic 2.pdf 60 KB | [VIEW](#)

Submissions Received (32/37)

B.,	Late
B.,	On time
B.,	On time
C.,	On time
C.,	On time
C.,	On time
C.,	On time
C.,	On time
C.,	On time
E.,	On time
E.,	On time
E.,	On time
G.,	On time
G.,	Late
G.,	On time
H.,	On time
I.,	On time
J.,	On time
L.,	On time

Comments

There are no comments

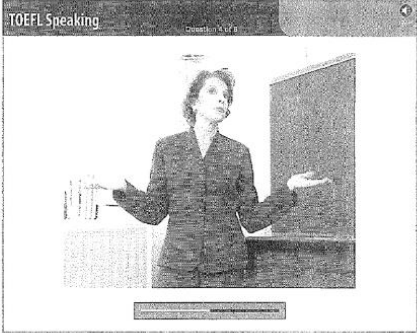
Write a comment

[Post](#)

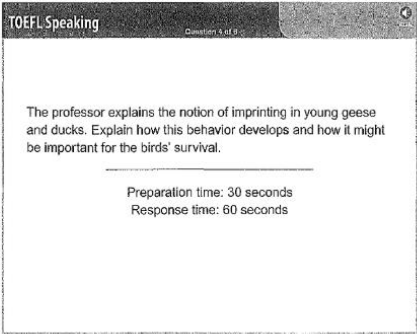
129%

Practice Test 2

Now listen to part of a lecture on this topic in an ecology class.



Now get ready to answer the question.



The professor explains the notion of imprinting in young geese and ducks. Explain how this behavior develops and how it might be important for the birds' survival.

Preparation time: 30 seconds
Response time: 60 seconds

You may begin to prepare your response after the beep.
Please begin speaking after the beep.

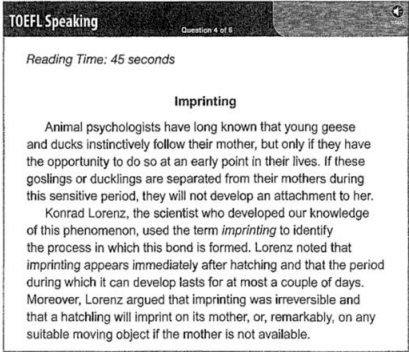
STOP ■■

schoolology UPGRADE COURSES GROUPS RESOURCES

Focus on GRAMMAR 5

Read the passage about imprinting in baby birds. You have 45 seconds to read the passage. Begin reading now.

PAUSE II (for 45 seconds)



Reading Time: 45 seconds

Imprinting

Animal psychologists have long known that young geese and ducks instinctively follow their mother, but only if they have the opportunity to do so at an early point in their lives. If these goslings or ducklings are separated from their mothers during this sensitive period, they will not develop an attachment to her.

Konrad Lorenz, the scientist who developed our knowledge of this phenomenon, used the term *imprinting* to identify the process in which this bond is formed. Lorenz noted that *imprinting* appears immediately after hatching and that the period during which it can develop lasts for at most a couple of days. Moreover, Lorenz argued that imprinting was irreversible and that a hatchling will imprint on its mother, or, remarkably, on any suitable moving object if the mother is not available.

Download image

Appendix II Speaking section directions from Gear & Gear 2006 test.

Diagnostic Test

SPEAKING SECTION

Directions

In this section of the test, you will be able to demonstrate your ability to speak about a variety of topics. You will answer six questions by recording your response. Answer each of the questions as completely as possible.

In questions 1 and 2, you will first hear a statement or question about familiar topics. You will then speak about these topics. Your response will be scored on your ability to speak clearly and coherently about the topics.

In questions 3 and 4, you will first read a short text. You will then listen to a talk on the same topic.

You will be asked a question about what you have read and heard. You will need to combine appropriate information from the text and the talk to provide a complete answer to the question. Your response will be scored on your ability to speak clearly and coherently and on your ability to accurately convey information about what you read and heard.

In questions 5 and 6, you will listen to part of a conversation or a lecture. You will be asked a question about what you heard. Your response will be scored on your ability to speak clearly and coherently and on your ability to accurately convey information about what you heard.

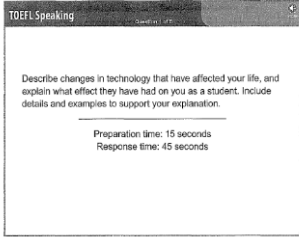
You may take notes while you read and while you listen to the conversations and lectures. You may use your notes to help prepare your response.

Listen carefully to the directions for each question. For each question you will be given a short time to prepare your response. When the preparation time is up, you will be told to begin your response.

Appendix JJ TOEFL-like test speaking instructions

Diagnostic Test

START ▶
1. Please listen carefully.



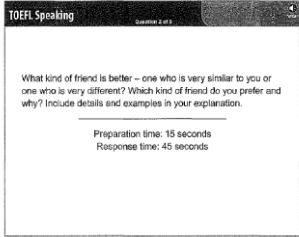
Describe changes in technology that have affected your life, and explain what effect they have had on you as a student. Include details and examples to support your explanation.

Preparation time: 15 seconds
Response time: 45 seconds

You may begin to prepare your response after the beep.
Please begin speaking after the beep.

STOP ■

START ▶
2. Please listen carefully.



What kind of friend is better – one who is very similar to you or one who is very different? Which kind of friend do you prefer and why? Include details and examples in your explanation.

Preparation time: 15 seconds
Response time: 45 seconds

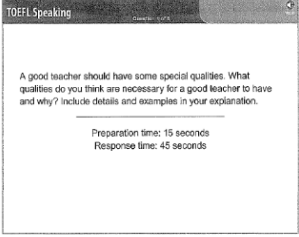
You may begin to prepare your response after the beep.
Please begin speaking after the beep.

STOP ■

29

Practice Test 2

START ▶
1. Please listen carefully.



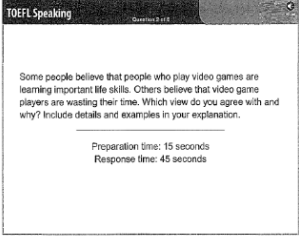
A good teacher should have some special qualities. What qualities do you think are necessary for a good teacher to have and why? Include details and examples in your explanation.

Preparation time: 15 seconds
Response time: 45 seconds

You may begin to prepare your response after the beep.
Please begin speaking after the beep.

STOP ■

START ▶
2. Please listen carefully.



Some people believe that people who play video games are learning important life skills. Others believe that video game players are wasting their time. Which view do you agree with and why? Include details and examples in your explanation.

Preparation time: 15 seconds
Response time: 45 seconds

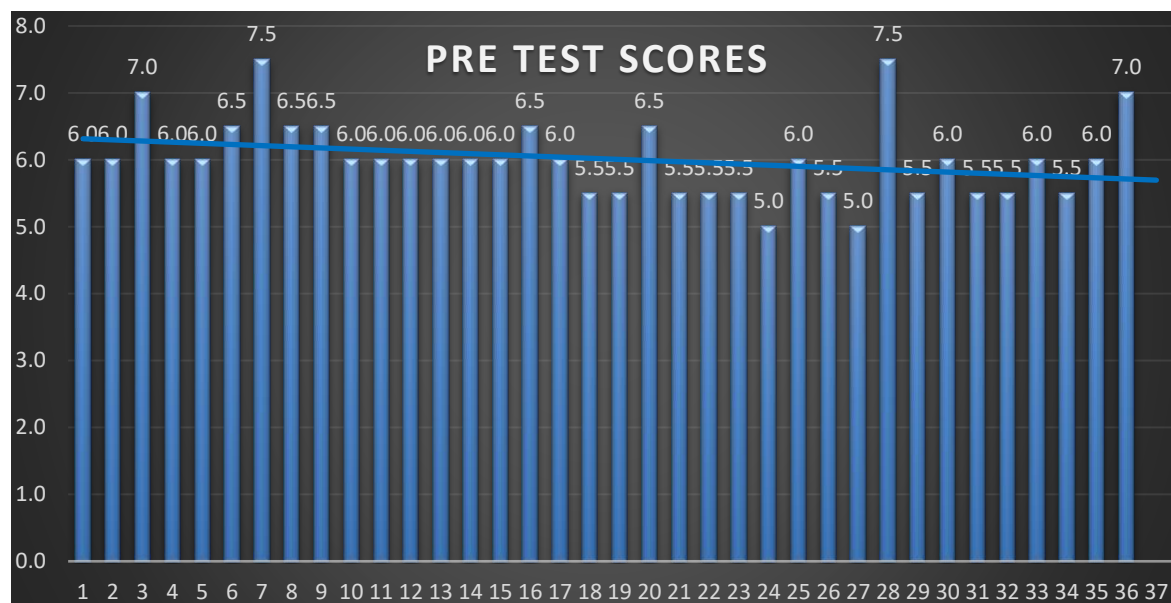
You may begin to prepare your response after the beep.
Please begin speaking after the beep.

STOP ■

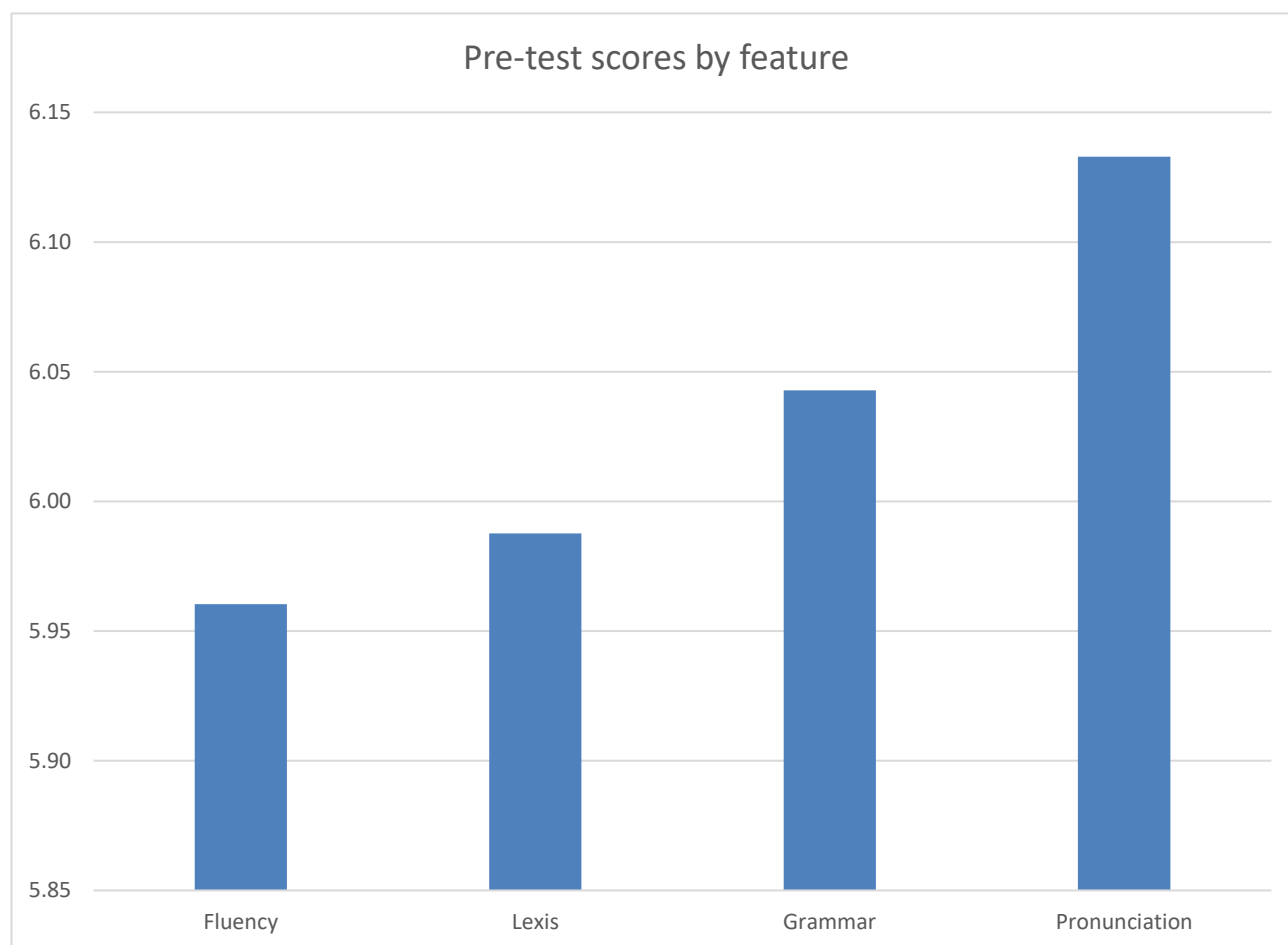
513

Appendix KK Pre-test results

Pre-test scores by participant

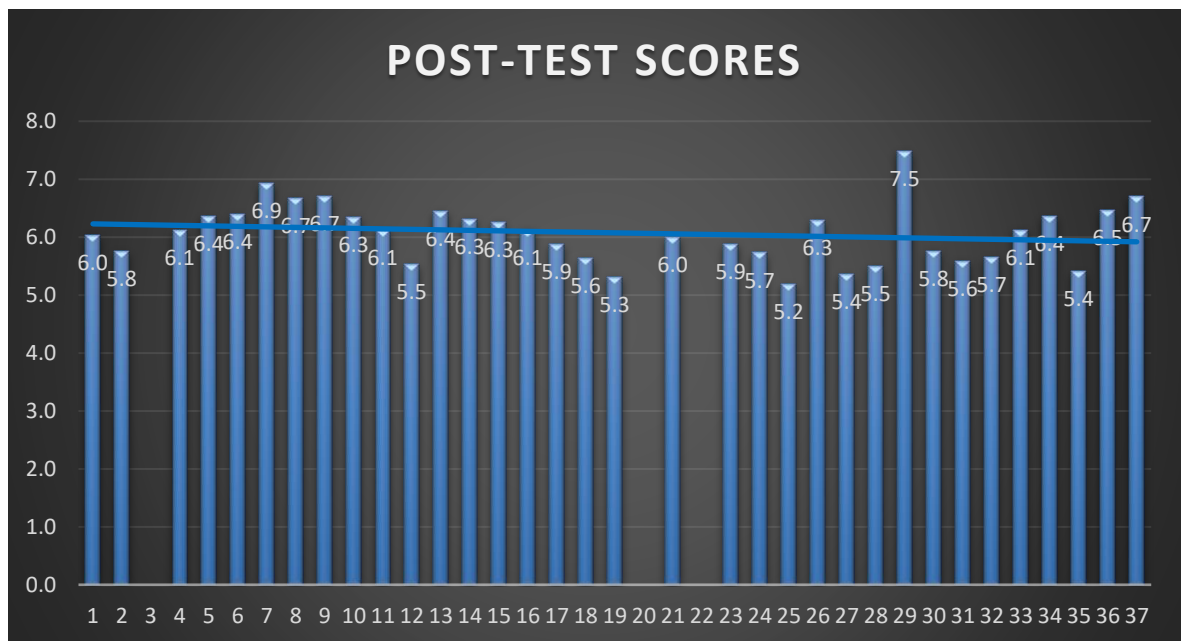


Pre-test scores by speaking feature

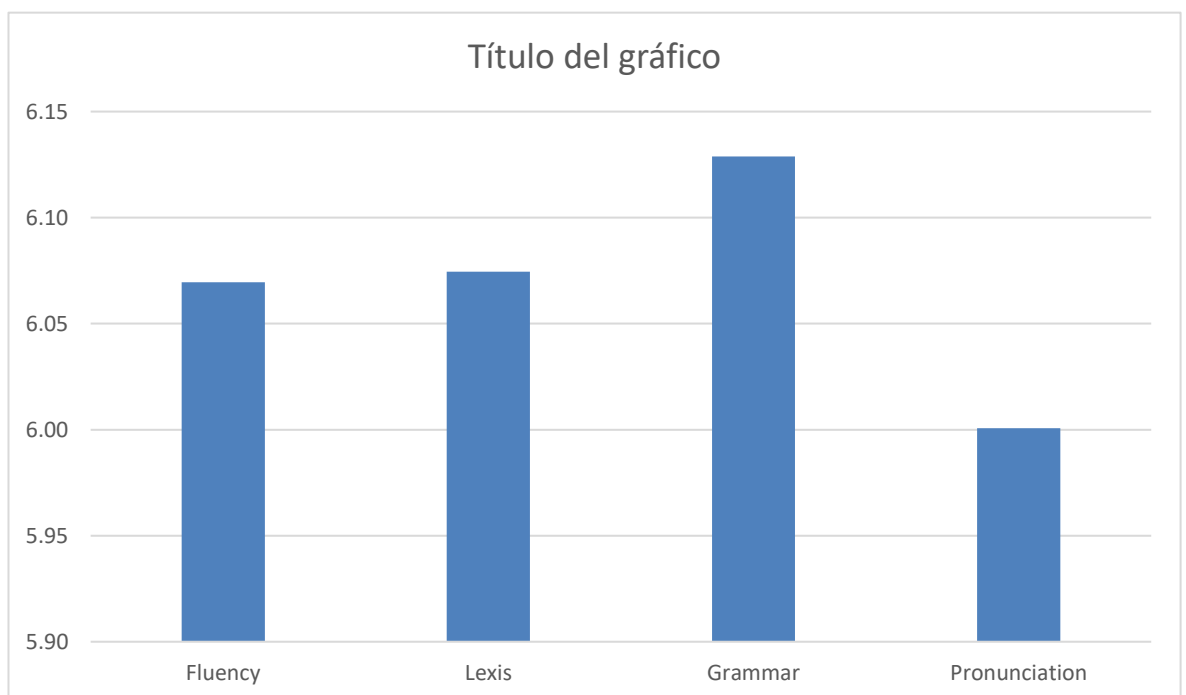


Appendix LL Post-test results

Post-test scores by participant



Post-test score by speaking feature



Appendix MM All forum assessment sheets of all students in Nvivo

The screenshot displays the NVivo software interface. On the left is a navigation pane with sections for 'Quick Access', 'IMPORT', 'Data', 'ORGANIZE', 'Coding', and 'Cases'. The 'Forum Assessment' project is selected under 'Data'. The main workspace shows a table of forum evaluation sheets with columns for Name, Code, and References.

Name	Code	Refer
All Forum Assessment	0	0
Forum 1 Evaluation Ge	7	13
Forum 1 Evaluation Gil	13	22
Forum 1 Evaluation Je	8	10
Forum 1 Evaluation Jo	10	27
Forum 1 Evaluation Ka	12	20
Forum 1 Evaluation M	0	0
Forum 1 Evaluation Na	0	0
Forum 1 Evaluation Sa	0	0
Forum 1 Evaluation Sh	0	0
Forum 2 Evaluation Ge	8	19
Forum 2 Evaluation Gil	12	19
Forum 2 Evaluation Jo	9	17
Forum 2 Evaluation Ka	11	17
Forum 2 Evaluation M	0	0
Forum 2 Evaluation Sa	0	0
Forum 2 Evaluation Sh	0	0

The right pane shows a preview of a document titled 'F1S1 Task Evaluation Sheet' from Southamptn University. The document contains the following text:

Southamptn UNIVERSITY C

F1S1 Task Evaluation Sheet

roduction: This research project deals with the design and implementation of Asynchronous Discussion Forums and you have just participated in one of these task-based fora. To be understand the design process of Asynchronous Online Discussion Fora, can you answer the following questions:

What did you like from this task? Why?

ed that we were able to practice grammar through a more personal theme because it helped (at least personally) to understand the topic better when I use it that way.

What did you not like from this task? Why?

I did not like that we had to ask to some of our classmates because the pictures were a little bit blurry and what I wanted to ask was already asked.

What would you change from this task to improve it? Why?

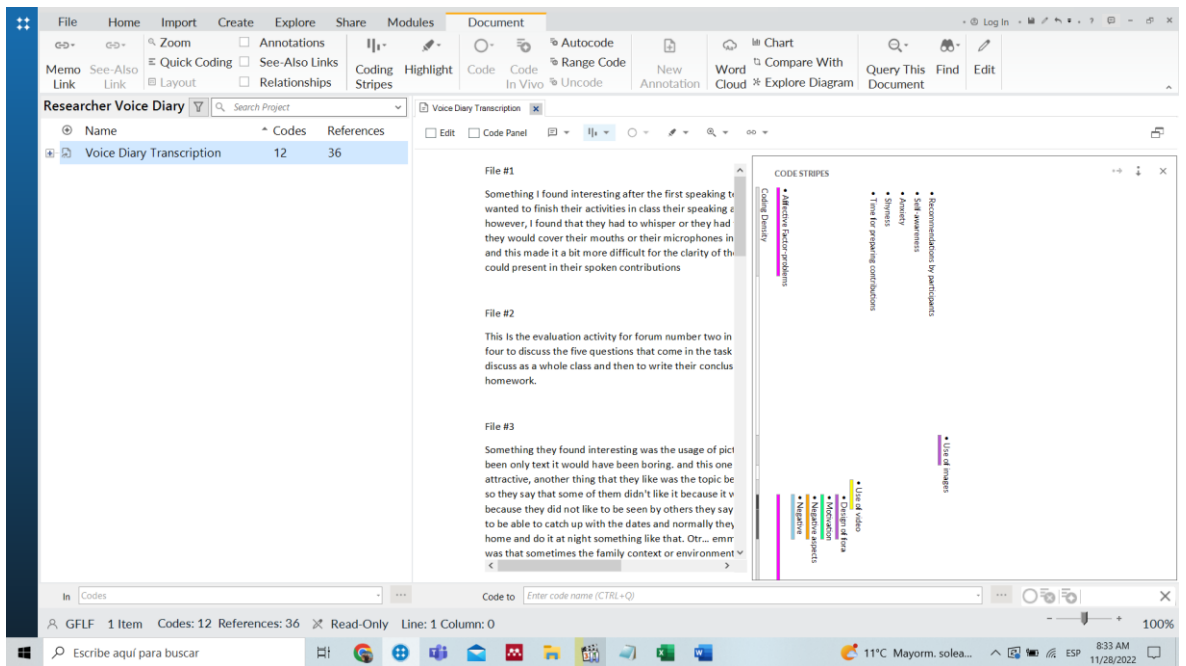
It would be just asking to one of our classmates so questions would not be repeated so fast.

What is something you would not change from this task? Why?

It was good for asking a question using an adjective clause because the whole point of the forum was to practice using adjective clauses.

The bottom status bar shows: GFLF 41 Items Codes: 0 References: 0 Read-Only Page: 1 100%

Appendix NN Researcher voice diary in Nvivo



Appendix OO Final course reflection in Nvivo

The screenshot displays the NVivo software interface. On the left is a navigation pane with sections for 'Quick Access', 'IMPORT', 'Data', 'ORGANIZE', 'Coding', and 'Cases'. The 'Data' section is expanded to show 'Final Course Reflection'. The main window shows a document titled 'Course Reflection Karla C' with a table of contents and a text view of the document. The text includes sections for 'SPEAKING' and 'GRAMMAR'. A 'CODING STRIPES' panel on the right shows a vertical bar with colored segments representing different codes: 'Exposed to English in youth', 'Catalina', 'Motivation', 'Positive', 'Grammar', and 'Spoken production'. The status bar at the bottom indicates '30 Items', 'Codes: 6', 'References: 8', and 'Line: 1 Column: 0'.

Name	Code	Referen
18 final reflection I Els	15	53
19 final reflection J Yi	12	14
21 final reflection L D	14	24
24 final reflection M I	10	13
26 final reflection M P	15	26
29 final reflection P S	13	33
31 final reflection R Al	13	24
32 final reflection R D	12	16
33 final reflection R Es	8	9
35 final reflection R M	18	36
36 final reflection T N	15	30
37 final reflection V M	15	21
Course Reflection Gil	7	8
Course Reflection Jen	10	18
Course Reflection Jon	7	14
Course Reflection Karl	6	8
Course Reflection Ma	13	19
Course Reflection Sa	18	27

To what extent do you feel these activities helped you improve your speaking skills in any way during this course?
I needed help on my writing so I believe these activities helped me out of my comfort zone since I wasn't used to write much.

SPEAKING

In order to develop your speaking skills for this course, several activities were designed, the first one was a text discussion forum, but the second one was developed in an oral discussion forum application (either audio or video).
To what extent do you feel these activities helped you improve your grammar skills in any way during this course? How did they make you feel (e.g., confident, embarrassed, etc)? Please provide as many details as possible.
Speaking activities were one of my favourites, I felt pretty confident while doing them. I feel these activities helped me improve my speaking skills. I had to use certain grammar when I spoke, which I was not used to and challenging to do.

GRAMMAR

In order to develop your grammar knowledge for this course, several activities were designed, the first one was presenting the grammar, the second one was grammar practice in the book and additional exercises placed on the website. Finally, there were some mock TOEFL-like grammar practice tests. These activities were designed for you to teach this grammar point, and intended for teaching, it impacts your knowledge of grammar.

To what extent do you feel these activities helped you improve your writing skills in any way during this course?

Appendix QQ Nvivo Codes emerged from the qualitative analysis of the different research instruments

Asynchronous Discussion Fora

Codes

Name	Description
Affective Factor-problems	This intends to find out what problems were perceived by the learners (see McIntosh et al. (2003.) Technical, etc. while carrying out the discussion fora
Affordances	This intends to analyze what elements are perceived by learners as being advantages of using discussion fora in the form of audio in classes, Elements such as additional time for planning, rehearsing, controlled production of L2 forms or any other that might arise (see Dugartzyrenova and Sardegna (2017))
Anxiety	This intends to analyze changes in anxiety provoked by the discussion fora. (See Poza (2011))
Autonomy	This intends to analyze whether there was an improvement in learner autonomy as a consequence of discussion fora
Design of fora	This intends to find out what aspects of forum design were relevant for learners experience (either good or bad)
Negative aspects	
Positive aspects	
Exposed to English in youth	This code refers to whether the participant either had private lessons, went to a bilingual school, or lived in an English speaking country and was in contact with the language.

Name	Description
Extroversion	This is intended to detect learners who identify themselves as being extroverted (or not introverted, not necessarily extroverted)
Fluency	Wilches 2014 found it to be beneficial for fluency
Grammar	This code intends to analyze the perception of impact of the fora in participants knowledge and use of grammar
Interaction	This intends to analyze learners perception towards interaction and what can be done to improve the experience
Peer to peer	
Intonation	Wilches 2014
Motivation	This intends to analyze if learners felt motivated or demotivated while carrying on the project and whether motivation changed from text, audio or video
Negative	
positive	
enthusiasm	
Not Exposed to English in youth	This means that the participant did not have a lot of exposure to the language when young
Participation in class	This intends to analyze the participation perception, and if there have been any changes in participation patterns from learners throughout the project

Name	Description
Pragmatic competence	Esjami M. and Dini 2015 found improved pragmatic competence
Previous Experiences with Forum	How participants felt about forums before this project
pronunciation	This code intends to see the perception of participants towards learning vocabulary during the fora project
Recommendations by participants	What do participants recommend
Reflection as future T	
Rehearsal	Refers to how the rehearsing of any activity, in this case, the recording of voice becomes easier with the practice
Self-awareness	Wijches 2014 found it to be beneficial for self-awareness
Self-confidence	This intends to analyze whether there were changes in <u>self confidence</u> or <u>self perception</u> throughout the project. (See Poza (2011))
Self-correction	Wijches 2014 found it to be beneficial for self-correction
Sense of Community	This intends to analyze whether the project helped with class integration or to improve the class environment
Shyness	This is intended to analyze those learners who perceive themselves as being introverted
Spoken production	This intends to analyze whether there were changes in learners spoken production capabilities throughout the project. See Nicolas-Pino (2013) and Wijches (2014)

Name	Description
Strategies for fora	this code intends to capture what participants did in the beginning of the project and how these activities progressed throughout the time it lasted. It intends to analyze the strategies used in the beginning and towards the end of the project
T presence CqI	
Task complexity	Fukuta and Yamashita 2015 recommend making easier tasks to focus on syntax
Time for preparing contributions	Dugartsyrenova and Sardegna 2017 found it supports development of speaking by giving more time for planning rehearsal and controlled production.
Use of audio	
Use of images	
Use of video	

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