LUMEN ET VIRTUS

Impacts of the use of WhatsApp for the development of oral production in English as L2

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Fabio Marques de Oliveira Neto[1]
Janaina Weissheimer[2]

ABSTRACT

This study aimed to investigate the possible impact of the use of the WhatsApp application on the development of the oral production of learners in English Language (L2), in terms of fluency. To this end, forty-six volunteer students from the Informatics, Agroindustry and Agriculture courses of the Agricultural School of Jundiaí/UFRN participated in the research. The data were generated through the application of pre and post-tests, which were tabulated and subsequently submitted to tests of the statistical program RStudio, to analyze the development of the learners' oral production in relation to fluency. The results indicate that the use of WhatsApp as a tool to practice oral skills can have a positive impact on students' oral production, considering their fluency. We believe that this study is relevant, since the use of the WhatsApp tool is widely disseminated in the school community and guarantees democratic access to digital technologies, contributing to a more egalitarian society.

Keywords: Oral production, Learning English as L2, WhatsApp.

INTRODUCTION

It is not necessary to have a deep analysis of Brazilian society to realize that, as in many other countries, the use of Smartphones has revolutionized contemporary life. Whether for a mere interaction on social networks, bank payments, or even to obtain information, it is certain that this technology has become indispensable.

According to a report by the National Telecommunications Agency (Anatel), in 2020, Brazil registered 234 million mobile accesses, a denomination reserved for cell phone chips that can be used for voice or internet connection services. This data also represented an increase of 3.26% compared to 2019, equivalent to 7.39 million new accesses, in absolute numbers.

The constant growth in the use of Smartphones has driven researchers to investigate the potential of using these devices in teaching-learning environments. With regard to foreign languages,

[1] Doctor in Education, Federal University of Rio Grande do Norte
Email: fabiomarques@watfordnatal.com.br
ORCID: https://orcid.org/0000-0003-1172-7267
[2] Doctor in Letters, Federal University of Rio Grande do Norte.
E-mail: janaina.weissheimer@gmail.com
ORCID: https://orcid.org/0000-0002-6318-4906

teachers and researchers have turned their eyes to the impact of the use of this digital tool. According to Costa (2013), the use of cell phones in English language teaching motivates learners, integrating them into a real learning context and improving their skills in the language under study.

In this scenario, the use of *Smartphones* as a pedagogical tool can also promote an optimization of the time allocated to the teaching-learning process; on the one hand, by enabling immediate online access to relevant information and, on the other hand, by making the time and space for learning more flexible, considering that this can occur at a different time and place than that intended for traditional teaching.

Among the applications used for communication, *WhatsApp* stands out on the world stage. According to the official website of the said app, it is used by more than two billion people in more than 180 countries. In Brazil, in 2021, there were 120 million *WhatsApp* accounts, making the country appear in second place in number of users, behind only India.

In recent years, WhatsApp has been transformed , from a mere messaging application, to a pedagogical resource adopted by several teachers of the most distinct curricular components. According to Andretta, Bernardi and Cordenonsi (2019), the *WhatsApp application* has been inserted and used in the school environment in various ways and contexts, revealing several functionalities to be explored in the educational environment.

As English teachers, we are always concerned with finding ways to help our students develop their L2 skills. We have understood, throughout our years of teaching, that proficient oral production is a desire of students. It's no wonder that the classic question is "*Do you speak English*?". Combining our interest in helping our students to realize this dream with the growth in the use of Smartphones for pedagogical purposes and the high acceptance of the *WhatsApp* application in our country (including for educational purposes), our goal is to investigate how *WhatsApp* can impact the development of oral production of L2 learners.

To try to achieve our goal, we are interested in answering the following research question: How does the use of the *WhatsApp* application impact the oral production of English language learners as L2 in terms of fluency? We hypothesize that the speaking tasks mediated by *WhatsApp* will have a positive impact on the participants' oral production.

RELEVANCE OF FLUENCY IN THE DEVELOPMENT OF ORAL PRODUCTION IN L2

Oral production is certainly one of the most complex skills of human beings. According to Levelt (1989), this type of production cannot do without a cognitive process in order to be understood. In other words, a fluent discourse needs prior planning that implies the selection of an appropriate form for its articulation. Furthermore, oral production is always developing, both due to

the emergence of new words in the language and the expansion of the speaker's lexicon. Thus, for Levelt (1989), the speaker should be considered as a highly complex information processor.

In turn, the role of oral production in L2 learning has undergone, since Swain's (1985) research, a considerable modification, no longer being a mere practice of existing knowledge (KRASHEN, 1985), and starting to be seen as an aspect of learning *per se*. According to Swain (1985), learners with oral and written comprehension skills equivalent to those of a native person generally do not achieve the same proficiency in production, which leads them to conclude that the processes involved in the production of a language are different from those involved in its comprehension.

In his Output Hypothesis, Swain (1985) postulates that, at the moment of language production, whether in the written or oral modality, the learner prioritizes his attention to the possible forms used to express the message and, then, perceives the gaps in his interlanguage and seeks to fill them. Based on this premise, for Swain (1993, 1995), there are four functions performed by *the output* in the learning process of an L2: the language practice function (fluency and automaticity); the trigger function (or the role of promoting cognitive registration); the function of testing hypotheses about structures and meanings; and the metalinguistic function (or reflective role).

In other words, when they produce L2, learners see that there is a gap between what they intend to say and what they can actually say. By perceiving the imperfections of their *output*, learners turn to their *input,* in order to seek the solution of the problem, an action that provides a cycle between input and *output* (SWAIN, 1993). Thus, by promoting cognitive registration, the learner can, on the one hand, generate new linguistic knowledge and, on the other hand, consolidate existing knowledge (SWAIN, 1993; SWAIN; LAPKIN, 1995).

It is true that the learner, in order to perform a quality oral production, must be aware of certain micro skills of speech. As recommended by Skehan (1996), the level of oral proficiency of an L2 speaker can be evaluated from the perspective of three dimensions: grammatical accuracy, complexity and fluency. Similarly, for Ellis (2009), a proficient learner is one who, using complex language, is able to perform tasks grammatically correctly and fluently.

According to Skehan (1996) and Ellis (2009), in oral production, speakers need to divide their attention between these three dimensions. In other words, due to the so-called *trade-off effect*, it is impossible to prioritize all three dimensions at the same time. To the extent that the learner allocates more attentional resources to a particular aspect, the others (or at least one of them) are negatively affected. In this way, the speaker seeks to balance the inadequacy of one system by focusing on another.

In line with the objectives of this work, we will shed light only on fluency. According to Ellis (2009), fluency is the ability to use language in real time, using more lexicalized systems, in order to

emphasize meanings. That is, a fluent speaker can communicate with a reduced number of pauses, hesitations or repetitions, thus facilitating the understanding of the message.

In the lesson of Skehan and Foster (1996), fluency is achieved when the speaker, at the time of L2 oral production, uses his implicit knowledge in an authentic performance. Thus, in order to establish fluent communication, redundancy, pause, prolonged silence and constant repetition are taken into account, among other factors.

The situation in which the speaker has insufficient levels of fluency causes, on the one hand, difficulties in interacting with interlocutors and, on the other hand, frustration in the face of the realization that the learner is unable to express his ideas satisfactorily. For Skehan (1996), it is common for the speaker to prioritize other aspects to the detriment of fluency (such as grammatical accuracy, for example), since the speaker has not yet mastered a repertoire of automated expressions in his L2, which are fundamental for real-time communication.

DIDACTIC USE OF *WHATSAPP*

In recent years, researchers have turned their eyes to the role of mobile digital technology, and especially *WhatsApp*, in learning (HAN, KESKIN, 2016; WEISSHEIMER, CALDAS, MARQUES, 2018); in the feedback of the oral production (WEISSHEIMER, CALDAS, 2021). The premise behind these studies is that, by producing texts, audios, images and videos, the learner engages in reflection and self-correction in a systematic way, which can contribute incrementally to learning. The fact that students edit their *output* can help them improve their speaking performance (SWAIN; LAPKIN, 1995).

Gomes (2013) researched, with teachers, positive aspects resulting from the use of *WhatsApp* in the classroom, among which the following stand out: it brings formal learning closer to informal; it improves continuous learning; it optimizes time in the classroom; it allows learning at any time and place; it improves communication and enables immediate evaluation and feedback.

For Ramble and Chipunza (2013), the insertion of the *WhatsApp* application in pedagogical activities causes greater student engagement and enables a new communication channel between the teacher and the learners. On the other hand, the aforementioned researchers identified a negative point of using the application in the classroom. For adult students, the use of *WhatsApp* asynchronously after school associates academic life with family life, which negatively impacts family relationships.

Bouhnik and Deshen (2014) researched the advantages of using *WhatsApp* in classrooms and subdivided them into three distinct categories. Technical advantages: easy handling, availability and immediacy; Educational advantages: encouragement of collaboration and feeling of comfort in relation to the other; Academic advantages: Access to learning materials after class hours.

Mattar (2014) attributes the use of *WhatsApp* in educational environments to the multiple features of the application, which allows the sending of texts, audios, images and videos. The aforementioned author also emphasizes the interest of Foreign Language teachers, who see the tool as an interesting possibility for the development of the language.

Finally, Caldas et al. (2018) used *WhatsApp* both for learners to record short oral productions and to receive *feedback* on them. The results of this study indicate not only that the use of *WhatsApp* impacted the development of students' orality (with regard to grammatical accuracy), but also that the participants judged the use of this application in the context of language teaching and learning to be positive.

Then, we will address, specifically and in detail, the methodological aspects of the research, focusing on the context of the participants, the instruments and procedures of data collection and analysis, and then shed light on the results and discussions.

METHODOLOGY

The focus of the research reported here was to investigate the possible impact of the use of *WhatsApp* on the development of the oral production of learners in English as L2, in terms of fluency. To achieve this goal, we based ourselves on the following research question: "How does the use of the *WhatsApp* application impact the oral production of English language learners as L2 in terms of fluency?" Taking into account that the object of investigation of Applied Linguistics (AL) is language as a social practice (BARROS; LEHFELD, 2007), our study presents a contribution to the field of AL, as it proposes to try to solve real needs, in our study specified as the development of the learners' oral production, with regard to fluency. In this sense, our research has an applied nature, since it focuses on the practical use of the *WhatsApp* application in an L2 learning environment.

CONTEXT AND PARTICIPANTS

The research was carried out at the Agricultural School of Jundiaí/UFRN, with volunteer students, in four classes of the third year of technical education integrated with the high school of the aforementioned Institution regularly enrolled in the courses of Agroindustry, Agriculture, Aquaculture and Informatics. At this institution, students have English classes twice a week, lasting an hour and a half per meeting. The age of the students ranged from 17 to 19 years (mean: 18). Fifty-two (52) students out of a total of one hundred and seventeen (117) volunteered to participate; however, only forty-six (46) actually produced responses to the instruments used in the study. The data were collected between March and October 2022 and were part of the postdoctoral internship of one of the researchers.

Aiming at a greater control of the variables, the data were collected with the students of one of the researchers, at the institution where he teaches, in order to standardize the material and method used in the different classes. In addition, the nature of the proposed tasks made it imperative that we maintain frequent contact with the students, guiding and encouraging them. All 46 participants owned *smartphones* and used their devices during data collection.

DATA COLLECTION INSTRUMENTS AND PROCEDURES

The study was approved by the Research Ethics Committee (REC) of the Federal University of Rio Grande do Norte (Opinion 5.276.636) and all participants signed a consent and assent form, authorizing the recording of their voices and participation in the research.

The students were submitted to a pre- and post-test, in which their fluency in L2 was assessed. The tests consisted of describing an image adapted from the *Preliminary English Test* (PET) of the University of Cambridge, for one minute. Within a period of eight months (March to October 2022), students were encouraged to record eight short audios in English, on a topic proposed by the teacher/researcher and then to send their oral productions to the teacher/researcher's *WhatsApp*. The suggested themes were: talk about yourself, talk about what you like and don't like to do, talk about your family, talk about your daily activities, talk about your classmates and teachers, talk about your city, talk about sports, and talk about your dreams (desires). The average interval between messages was 24 days. The feedback was made by the teacher/researcher, through *WhatsApp* and centered on positive aspects of the participants' oral productions.

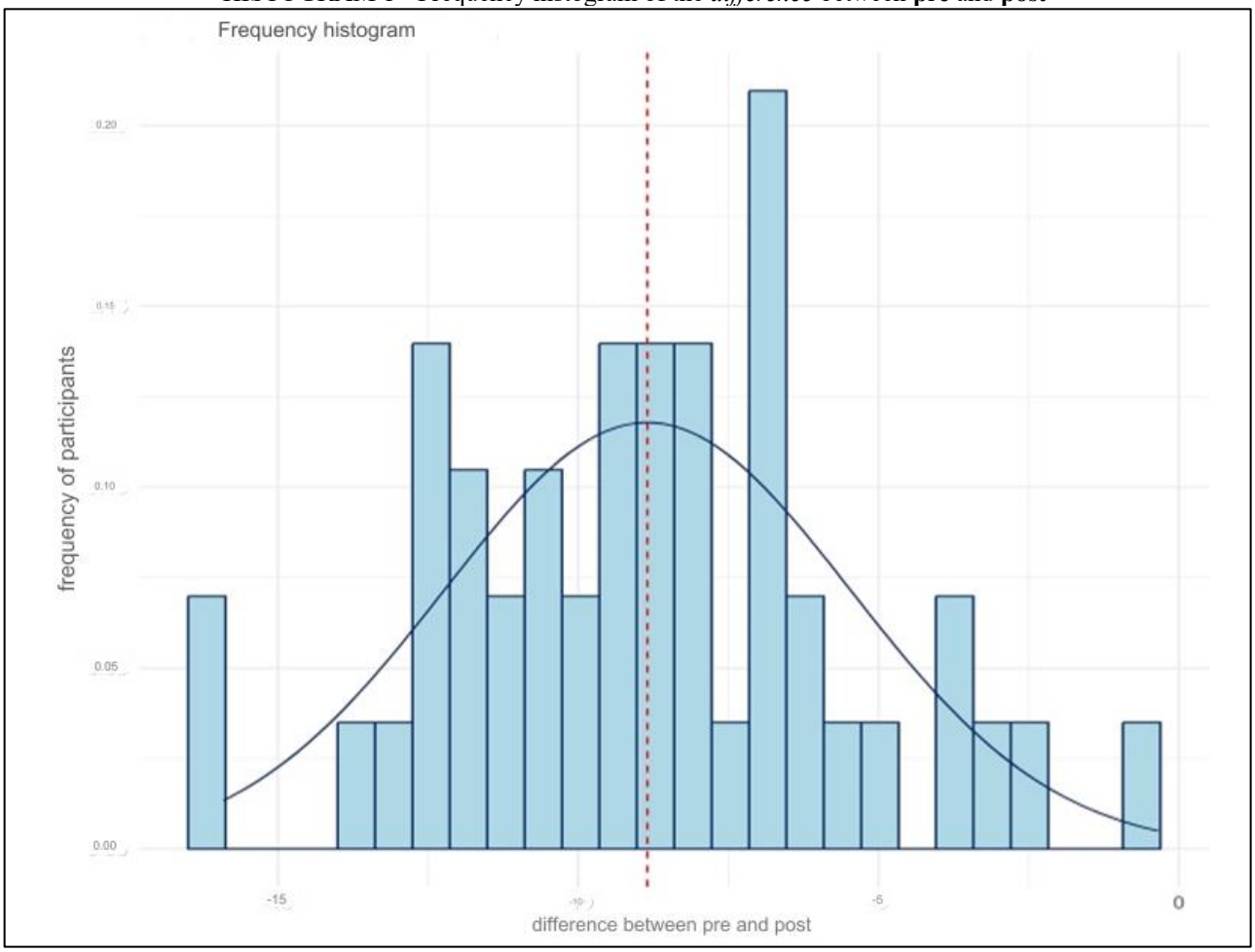
DATA ANALYSIS INSTRUMENTS AND PROCEDURES

The results of the pre- and post-test were evaluated to investigate the possible impact of the use of *WhatsApp* on the development of oral production of English language learners. To do so, we first transcribe both tests from each participant. We then divide the number of words spoken by the total time spent (in seconds) and multiply the result by 60 (MEHNERT, 1998; WEISSHEIMER, 2007). Then, we used the statistical program *Rstudio* (2015), in which we submitted our data to the parametric T-test, to determine whether the differences revealed by the participants' mean scores reached statistical significance. The T-test was chosen because our data, as attested by the *Shapiro-Wilk* test, had a normal distribution.

RESULTS AND DISCUSSION

In order to verify whether there is a statistical difference between the pre- and post-test, our first step was to use the *Shapiro-Wilk normality test*, which allowed us to state that the difference between these variables follows a normal distribution ($p = 0.868$), as shown in histogram 1.

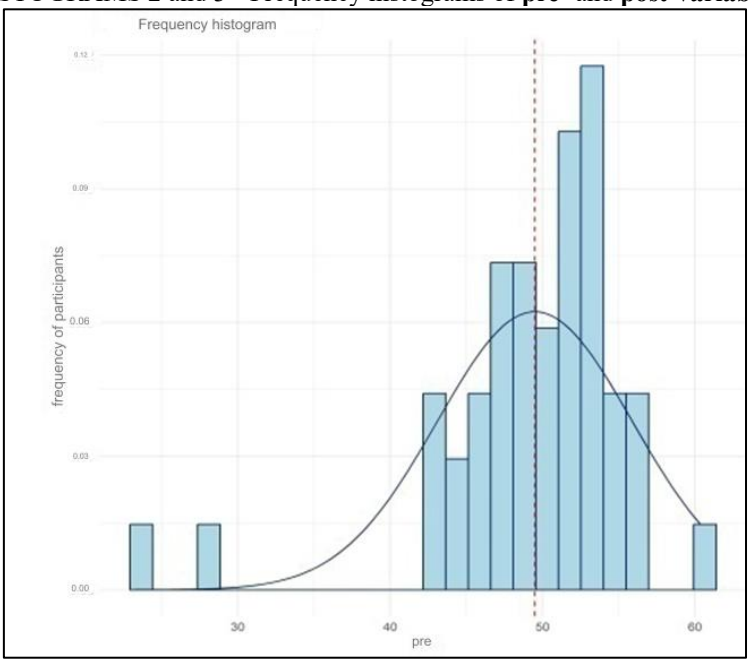
HISTOGRAM 1 - Frequency histogram of the *difference* between **pre** and **post**

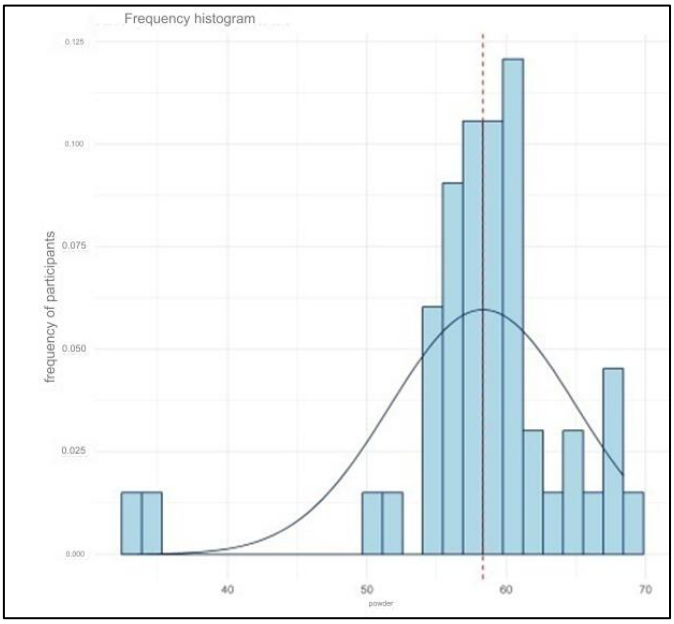


Source: Authors

Then, in order to verify the correlation between the pre- and post-test, we resorted again to the *Shapiro-Wilk test*, which indicated that the pre- and post-test variables, considered as raw scores and not the difference between scores, do not follow a normal distribution, as shown in histograms 2 and 3.

HISTOGRAMS 2 and 3 - Frequency histograms of **pre-** and **post-variables**

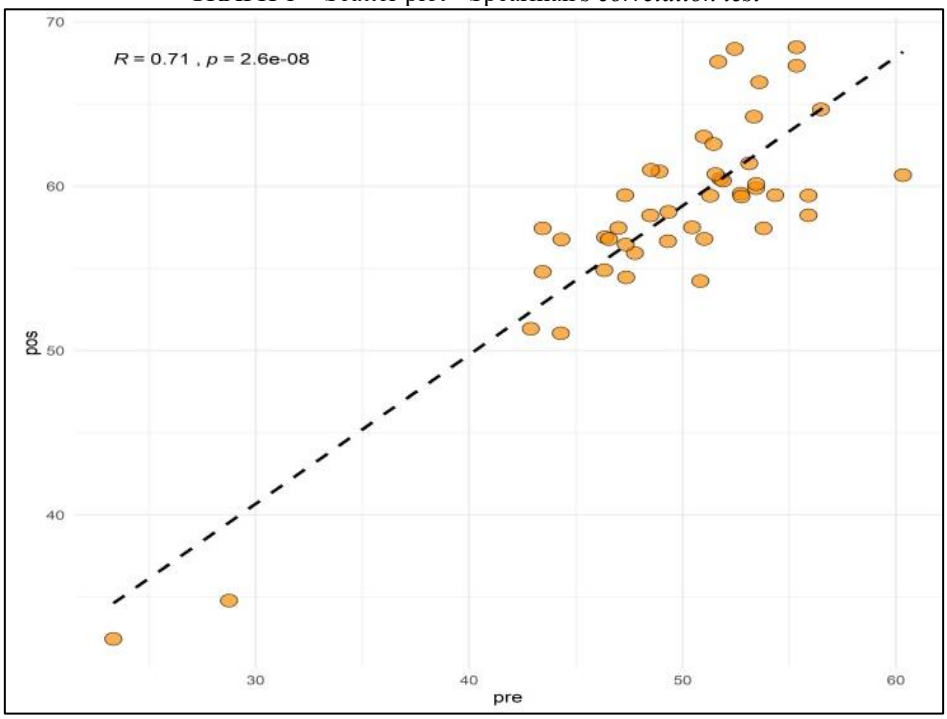




Source: Authors

Since the pre- and post-data do not follow a normal distribution, we used the Spearman non-parametric correlation test to verify the correlation between pre- and post-correlation. As can be seen in Plot (dispersion) 1, the aforementioned test showed that fluency in the pre-test has a positive relationship with fluency in the post-test (Rho = 0.71, $p < 0.001$). Thus, the higher the score in the pre-trial, the higher the score in the post-graduation. This shows that the same participants who performed more fluently in the pre-test also did so in the post-test, attesting to the effectiveness of the measure used in this study.

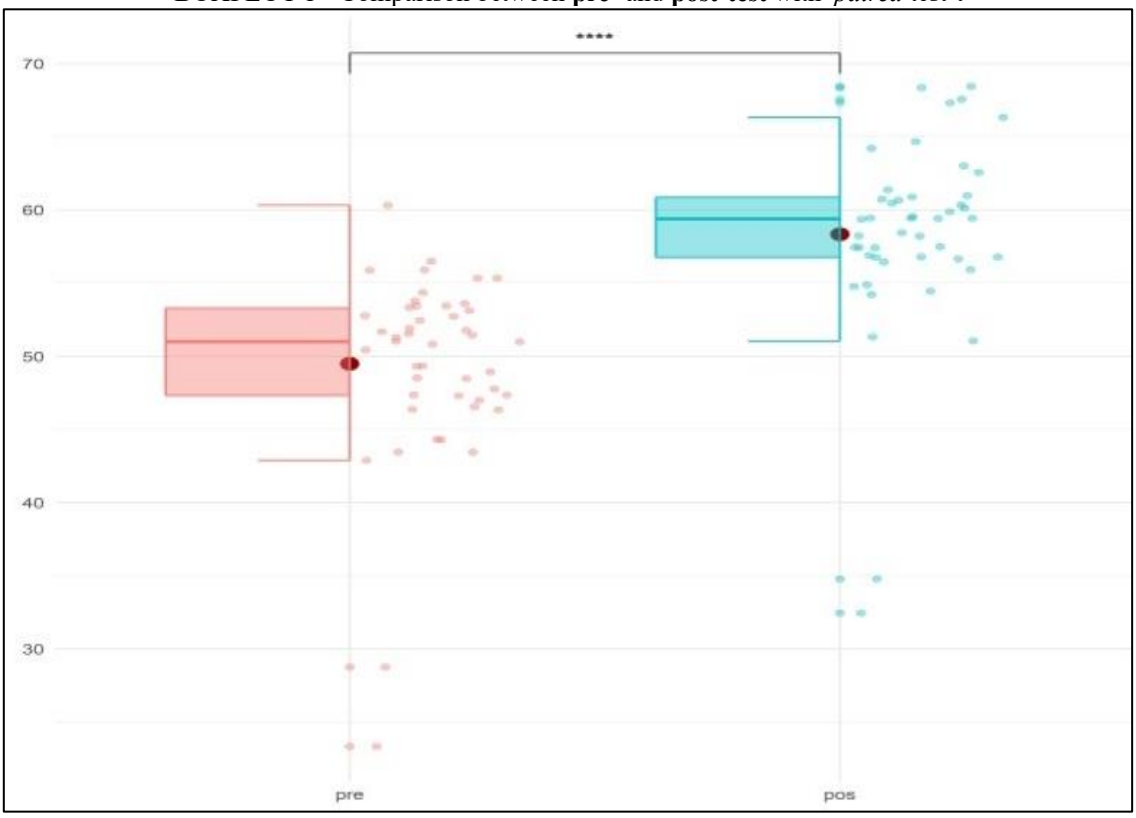
GRAPH 1 – Scatter plot - Spearman*'s correlation test*



Source: Authors

In a second moment, we moved on to the comparison between pre- and post-test with the *paired t-test*. The result showed that the mean fluency in the pre-test is different from the mean fluency in the post-test ($t45 = 17.74$, $p < 0.001$), as we can see in Boxplot 1.

BOXPLOT 1 - Comparison between **pre-** and **post-test** with *paired* test-t



Source: Authors

Through our results, we can observe that the mean fluency of the pre-test was lower than the mean of the post-test fluency, which allows us to suggest that our pedagogical intervention may have contributed to improve the fluency of the participants of our study. In other words, the proposed activities may have helped the participants to have more confidence to take risks in the oral production of their post-tests.

We know that the non-prioritization of fluency by the speaker is common in L2 (SKEHAN, 1996), due to the lack of sufficient opportunities to justify the pressures imbricated in real-time communication, especially considering that the speaker's repertoire of automated expressions is still developing. Added to this, we have the difficulties generated by individual differences (shyness, for example). Therefore, as the results of this study show, it is necessary to present proposals so that our students are able to overcome these obstacles.

In our study, we found that there is a positive relationship between the pre-test and the post-test. In addition, the fluency results of the post-test were significantly higher than those of the pre-test. Thus, our results allow us to suggest that systematized and continuous interventions, similar to the one carried out in this research, can contribute to positively impact the development of learner fluency. In other words, the more possibilities we give students to practice *speaking*, the greater the chances that they will increase their level of fluency.

FINAL CONSIDERATIONS

The present study aimed to investigate the possible impact of the use of *WhatsApp* on the development of oral production in English, in terms of fluency. To this end, forty-six students performed eight oral production tasks (audios) and sent them to the researcher through the *WhatsApp* application over a period of eight months (March to October 2022). A pre-test was carried out before the production of the first audio and a post-test after the eighth audio. Our hypothesis was that the oral production tasks mediated by *WhatsApp* would have a positive impact on the participants' oral production, considering their fluency.

The results of our research indicate that the use of *WhatsApp* as a tool to practice oral skills can have a positive impact on students' oral production, considering their fluency. These results tend to corroborate the theories presented here, especially if we take into account that the planning that precedes the recording of audios and the successive attempts at recording necessarily lead the learner to reflect both on the choice of vocabulary and on the most appropriate way of articulating it, which, in the future, may translate into a development of their oral production.

Although promising, the results of this study should be analyzed in accordance with some of its limitations. First, the number of participants (46) is not sufficient to promote generalizations in the face of such a limited number of data collected. On the other hand, the introduction of a new factor (use of *WhatsApp*) in the classroom can lead to a reflection on whether the same results would not be obtained with any other novelty that encourages oral production (a conversation group, for example). The lack of a control group may also point to possible inaccuracies in the survey. Thus, the results presented here should be perceived as suggestive, rather than conclusive.

As suggestions to overcome the limitations presented, we have that a larger number of participants could mean more accurate results; in addition, it could promote the division of participants into experimental and control groups, in which some would use *WhatsApp* and others would perform the oral production tasks by another means (in person, in a conversation group, for example) for comparison purposes.

In a Brazilian public school reality, in which students rarely develop oral skills, limiting their studies to reading texts, any attempt to improve the oral production of learners should be celebrated, in order to prepare them in a more democratic and equitable way for the real world, which increasingly communicates in English. We advocate for education in which all students can have access to learning opportunities. We believe that, in the globalized world in which we live, the English language and, especially, oral proficiency in this language, can open doors. Our hope is that studies like this can draw attention to the potential of using *WhatsApp* as a pedagogical tool, leading teachers to consider its use and researchers to replicate its results in different contexts.

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