

Oral storytelling via WhatsApp voice notes as a tool to improve adult learners' fluency

Narración oral mediante notas de voz de WhatsApp como herramienta para mejorar la fluidez de estudiantes adultos

Narrativa oral por meio de notas de voz do WhatsApp como ferramenta para desenvolver a fluência de estudantes adultos

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Abstract: Speaking fluency is regarded as a necessary component for success in the EFL classroom. A2-level adult learners at a language center consistently demonstrate difficulties in oral performance, exhibiting short, hesitant responses and numerous instances of self-correction, attributed to an overemphasis on achieving grammatical accuracy. To address this gap, this action research investigated the effects of oral storytelling through WhatsApp voice notes in a group of six adult participants. The intervention consisted of seven sessions where participants collaboratively created a story by recording sequential audio notes based on teacher prompts, which were later used for in class storytelling. The study included pre and post intervention tests analysed with an analytic fluency rubric examining words per minute (WPM), pauses, and instances of self-correction. The results were positive: all participants demonstrated an increase in their overall fluency score. Specifically, five out of six participants reduced their number of pauses, and four out of six increased their WPM. These findings suggest that the intervention successfully promoted uninterrupted speech over self-monitoring. The positive outcome is primarily attributed to the combination of the engaging, familiar communication tool and the students' commitment, which fostered a range of positive emotions, from reduced initial anxiety to feelings of pride and confidence.

Keywords: participatory research, oral expression, storytelling, mobile communication, adult education, language instruction.

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Resumen: La fluidez oral se considera un componente necesario para el éxito en el contexto de la enseñanza del inglés como lengua extranjera (ILE). Los estudiantes adultos de nivel A2 en un centro de idiomas muestran constantemente dificultades en su desempeño oral, evidenciando respuestas breves, vacilantes y numerosas instancias de autocorrección, atribuidas a un énfasis excesivo en lograr la precisión gramatical. Para abordar esta brecha, esta investigación acció examinó los efectos de la narración oral mediante notas de voz de WhatsApp en un grupo de seis personas adultas participantes. La intervención consistió en siete sesiones en las que las personas participantes crearon colaborativamente una historia mediante la grabación de notas de audio secuenciales, basadas en indicaciones docentes, las cuales se utilizaron posteriormente para la narración oral en clase. El estudio incluyó pruebas previas y posteriores a la intervención, analizadas mediante una rúbrica de análisis de fluidez que examinó las palabras por minuto (PPM), las pausas y las instancias de autocorrección. Los resultados fueron positivos: todos los participantes mostraron un incremento en su puntaje general de fluidez. Específicamente, cinco de seis participantes redujeron su número de pausas, mientras que cuatro de seis aumentaron sus PPM. Estos hallazgos sugieren que la intervención promovió exitosamente el habla ininterrumpida por encima de la autosupervisión. El resultado positivo se atribuye principalmente a la combinación de una herramienta de comunicación atractiva y familiar con el compromiso del estudiantado, lo cual propició una variedad de emociones positivas, desde una reducción de la ansiedad inicial hasta sentimientos de orgullo y confianza.

Palabras claves: investigación participativa, expresión oral, narración de historias, comunicación móvil, educación de personas adultas, enseñanza de idiomas.

Resumo: A fluência oral é um componente essencial para o desempenho em aulas de inglês como língua estrangeira (EFL). Estudantes adultos de nível A2 em um centro de idiomas apresentam dificuldades recorrentes no desempenho oral, com respostas curtas e hesitantes e frequentes casos de autocorreção, associados à ênfase excessiva na precisão gramatical. Para enfrentar essa lacuna, esta pesquisa-ação analisou os efeitos da narração oral por meio de notas de voz do WhatsApp em um grupo de seis participantes adultos. A intervenção ocorreu em sete sessões, nas quais os participantes criaram colaborativamente uma história e gravaram notas de áudio sequenciais com base em sugestões do professor. Posteriormente, essas gravações foram utilizadas em atividades de narração em sala de aula. O estudo incluiu testes pré e pós-intervenção, analisados por meio de uma rubrica analítica de fluência que avaliou o número de palavras por minuto (WPM), as pausas e os casos de autocorreção. Os resultados foram positivos: todos os participantes aumentaram sua pontuação global de fluência. Especificamente, cinco dos seis participantes reduziram o número de pausas, e quatro aumentaram seu WPM. Esses achados sugerem que a intervenção favoreceu a fala contínua em detrimento da automonitorização excessiva. O resultado positivo é atribuído principalmente à combinação de uma ferramenta de comunicação familiar e envolvente com o engajamento dos estudantes, o que favoreceu emoções positivas, como redução da ansiedade inicial, orgulho e confiança.

Palavras-chave: pesquisa participativa, expressão oral, narração de histórias, comunicação móvel, educação de adultos, ensino de línguas.

INTRODUCTION

During the last decades, the speaking skill has gained a central and vital role in EFL curricula. Its importance has increased due to the development and use of the communicative language teaching (CLT) approach and later, what Ellis (2003) describes as a strong version of CLT, Task based Language Teaching (TBL). Tasks provide a basis for language curriculum. They can work as a useful tool for planning a communicative curriculum in contexts where there are few possibilities for authentic communicative experiences, as it is in foreign language teaching and learning context.

Regardless of the approach, a well-balanced language course is built on four strands of learning, and Nation and Newton (2009) define them as learning through; meaning focused input, meaning focused output, language focused learning, and lastly fluency development. Any course at an A2 level, according to The Common European Framework of Reference (2020) requires users to demonstrate control over specific repertoire, and accordingly their level of fluency demonstrates that they can communicate with sufficient ease despite some noticeable hesitation, false starts and reformulation.

However, this does not reflect reality as many students struggle with speaking and name it as their main weakness. This is also the case of adult students at an A2 level at a language centre in Concepción who struggle with oral tasks. Their replies are characterized by short responses, numerous self-corrections, and prolonged pauses. These aspects explain the considerable time they spend formulating their answers due to an overemphasis on accuracy. This lack of fluency often leads to overthinking, difficulty recalling grammar and vocabulary structures previously learnt, and insecurity about their language abilities.

Interestingly, their responses do not reflect the lexical knowledge they demonstrate in written tasks where they generally perform well. This receptive knowledge is not enough. As Newton and Nation (2021) suggest, learners should be encouraged to speak in order to fully develop their language skills. The more learners engage in speaking, the better they will become at it. Consequently, active participation in speaking, especially in a challenging context, is crucial in converting receptive knowledge into productive use and improving overall language proficiency.

For fluency development to happen it is vital to identify which aspects of fluency need to be addressed. Tavakoli and Skehan (2005) suggest that fluency should be evaluated in terms of three groups of measures: speed, breakdown fluency and repair fluency. First, speed fluency considers the flow and continuity of speed; second, breakdown fluency deals with the pauses and silences that break down the flow of speech and which, according to Yamashita and Fuyuno (2022) are pauses identified by native and non-native listeners, as being over 0.6 seconds. And third; repair fluency measures the repairing process as in reformulations that are used to repair speech during the production process. These three aspects are, therefore, key measurable aspects which have been used in research over the years, which is why they are the core of the analysis of fluency for this research as well.

Since fluency is regarded as one aspect of oral communication necessary to be part of an English course, Newton and Nation present three approaches for it. The first approach is focused on repeated practice with the same material. The second method emphasises making connections and associations with known language items, presenting learners with various options of use for that single item. The third approach is a combination of the previous two. Here, fluency occurs because learners gain control of the language and use it in a variety of forms.

A technique which has been recognized in recent years to provide repeated practice is storytelling. Sandry and Supramaniam (2024) describe storytelling as a tool that can improve the development of speaking skill in adult learners, not only in terms of fluency but in other aspects of the speaking skill such as comprehension, vocabulary, pronunciation, and grammar. Moreover, the repetition of the same story, as showed by Dianelo et al. (2023), helped students to convey their work effectively to the class by becoming familiar, comprehending and engaging with the content of the story. Additionally, it has also showed improvements in students' interest and motivation in learning English, mainly because of the effects it has on their readiness and preparation for a speaking task (Purwasari and Nugraha, 2023); thus, the more confident they feel the more they engage and enjoy the lesson.

Storytelling is a co-creative act in that the listener's brain activity mirrors the storyteller's brain activity; for storytelling to succeed is important that students listen attentively to each other to build on each other's responses (Heathfield, 2015); thus, by bringing creative tasks and prompts to the class, students can boost their creative thinking, linking their own personal ideas with their classmates. Studies such as Qiu and Cheng (2022) demonstrated how storytelling tasks did not have an impact on students' accuracy; nevertheless, it enhanced collaborative work, length of speaking time, and confidence in the language, since for storytelling clarity and fluency are more important than accuracy.

Despite storytelling already having positive results in terms of engagement, this action research aimed to incorporate a tool which can also provide students with English language practice that can go beyond the classroom time, which can be familiar and easy to use. Chile and Latin America have higher numbers of WhatsApp use (Pew Research Center, 2024); this is an app frequently used for communication between friends and family whose use for educational purposes has increased over the years. A study conducted by Martiz and Recker (2019) demonstrated that instant messaging apps like WhatsApp were noted to have supported collaboration beyond the classroom. Furthermore, Albogamy and Algethami (2022) reported positive results in students' speaking proficiency. WhatsApp voice notes had a significant impact on student's oral skills, as it seems from students' views that it had an impact on their fluency, vocabulary and pronunciation.

Based on these benefits, the general objective of this study was to examine the contribution of a storytelling-based intervention via WhatsApp voice notes into the oral fluency development of EFL adult learners. To achieve this, the following specific objectives were established: firstly, to describe changes in the participants' oral fluency performance; and secondly, to identify learners' perceptions regarding the use of storytelling via WhatsApp voice notes as a tool to support their oral fluency. This article was written in the context of the research grant FONDECYT 1251013 "Intervención en las concepciones y prácticas de evaluación formativa y estudio de su relación con la autoeficacia, el autoconcepto, la autoestima y la identidad profesional de futuros profesores de inglés" [An examination of the concepts and practices of formative assessment and a study of their relationship to self-efficacy, self-concept, self-esteem, and professional identity among future English teachers] and the research grant FOVI250167 "English Language Assessment Research Network (ELARENE): Red de universidades regionales y extranjeras para el fomento de la investigación en evaluación del y para el aprendizaje en la formación de profesorado de inglés en Chile" [Network of regional and international universities to promote research on assessment of and for learning in English teacher education in Chile].

MATERIALS AND METHODS

This study is categorized as action-research, following the four-step cycle described by Mertler (2021): planning, acting, developing and reflecting. Following these steps, the present study aimed to address learners' lack of oral fluency, identified as a significant factor affecting their English language learning progress. Consequently, this action research adopted a mixed-method approach to collect and analyse both qualitative and quantitative data. To address this issue, a series of storytelling tasks were implemented as the core of the acting stage.

Participants were selected through convenience sampling. The sample consisted of six adult learners (four males and two females) from a private language centre in Concepción, Chile. The participants, aged 18 to 46, were at an A2 level according to the CEFR; three participants were placed in the course after completing an oral placement test, while the remaining three progressed from the previous level. The course consisted of 54 hours in total, with sessions held twice a week, each lasting one hour and forty-five minutes. Regarding ethical considerations, participation was voluntary and all participants signed a consent letter ensuring anonymity and confidentiality, while also informing them of their right to withdraw from the study at any time without any consequences.

The intervention followed a Task-Based Learning (TBL) approach, in which storytelling was the main task. The plan consisted of eight sessions of 45 minutes; however, only seven sessions took place due to external reasons. The process began with a pre-intervention session to set a baseline, in which participants told an anecdote based on a randomly selected prompt provided by the teacher. The anecdotes lasted around one to two minutes. Subsequent sessions integrated WhatsApp voice notes for collaborative story creation. Outside of class, students recorded voice notes in response to the teacher's prompts (visual, written, or audio) to build a story according to a randomly assigned order. This changed for every story to ensure that each student worked on different parts of the narrative. During class, learners listened to the collective story and performed preparatory tasks which led to retellings. To raise awareness of performance, a checklist was used for self and peer assessment.

In the final session, learners repeated the initial anecdote task as a post-intervention test to identify fluency changes. The decision to use the same anecdote prompt was intended to maintain task consistency and allow for a more direct comparison of their fluency performance. Although repeated practice of a similar task may have influenced students' performance and should be considered when interpreting the results, it is important to note that none of the participants told the same anecdote, which may have been due to the time gap between pre and post intervention tests.

The data collection techniques considered were both quantitative and qualitative. As a quantitative tool a fluency rubric was used to analyse the pre and post intervention tests, providing a numerical value to participants' performance for the purpose of addressing specific objective number one. This analytic rubric was designed considering fluency aspects supported by literature and consisted of three criteria and three performance levels, which measured a minute of speaking time. These criteria were the following: speed rate as in the number of words produced per minute, number of pauses produced per minute, and the instances of self-correction observed. The levels of performance went from high to low fluency with scores ranging from 3 for high fluency and 1 for low fluency. The software PRAAT was used to determine the length of the pauses since those which were over one second long were considered for the analysis.

Regarding a qualitative tool, photovoice was used. Photovoice is a participatory research method in which participants provide data through photographs that reflect their experiences and perceptions. In this action research, this tool was selected because of its innovative format and its potential to be appealing and engaging for adult learners, and it was used to collect data for specific objective two. The study focused on two dimensions; first, participants' perceptions of storytelling and voice notes; and second, their perceptions of their own oral fluency after the intervention in relation to the specific fluency indicators considered (speed, pauses and self-correction). As Higgins (2014) noted, this approach has become widely used among researchers and social scientists utilizing participatory visual methods.

This research followed a qualitative content analysis, which is identified by Preiser et al. (2021) as a strategy that aims to recognise and examine patterns by focusing on emerging themes within textual data, which in this research, is the data collected from the instrument photovoice. The data was presented in the form of words, themes and categories which were drawn by the researcher's interpretation of students' responses. This research also incorporates a quantitative instrument: an analytic rubric that provided numerical data on various aspects of fluency. The average results collected from each category and the total fluency rubric scores were calculated and reported. These scores were then analysed using descriptive statistics to determine measures of central tendency (mean, median, mode) and dispersion (standard deviation, range), providing a general overview of students' fluency levels and the variability within the group.

Despite the systematic implementation of the action plan, some methodological limitations must be acknowledged. Firstly, the small sample size (6 participants) limits the representativeness of the findings and the possibility of generalizing the results to broader EFL contexts without forgetting that this is action-research, in which number of participants is not a limitation in itself. Secondly, the absence of a control group reduces the study's internal validity as observed improvements cannot be attributed only to the intervention. Additionally, although a time gap between the pre and post intervention tests was maintained to mitigate the effect of using a similar task, participants' improvements might still be partially influenced by their familiarity with the task. Furthermore, the reliability of the quantitative results may also be limited by the fact that the data were analyzed by a single researcher without external validation, considering this is a small-scale study. Finally, the use of an asynchronous tool like WhatsApp requires high levels of learner commitment and consistent teacher monitoring to ensure that communication remains focused on the pedagogical task. While these limitations are part of the specific scope of this action research, they suggest the need for future studies with larger groups to strengthen validity.

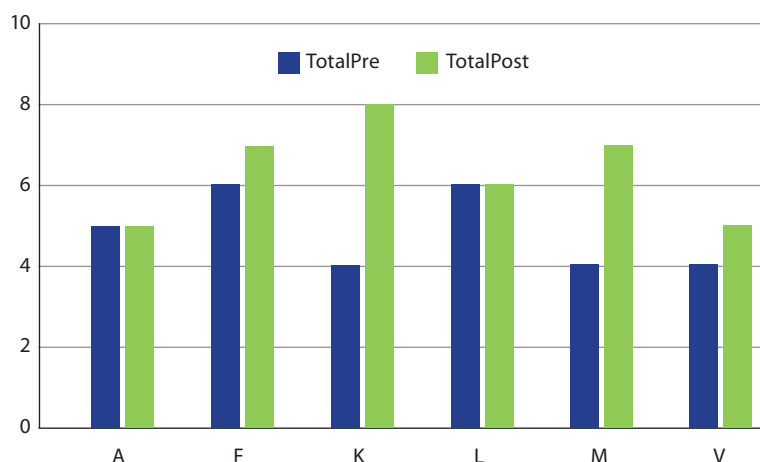
DISCUSSION OF RESULTS

In terms of the findings, the results revealed that most participants experienced an overall improvement in every aspect of oral fluency analysed. As Figure 1 shows, each criterion presented either an improvement or their maintenance with none of the participants decreasing their scores after the intervention. Participants uttered more words per minute (WPM), a result that can be attributed, in the first instance, to the systematic creation and recording of voice notes shared via WhatsApp. This task allowed learners to engage in deliberate planning, which not only stimulated their creative thinking but also fostered, as reflected in their photovoice data, a level of metacognitive awareness regarding the language required to accomplish the storytelling tasks. The total scores obtained from the fluency rubric (see Figure 1) confirm this tendency.

The maximum possible score of 9 represents high fluency across all criteria (speed, pauses, and self-correction). The results showed that 66% of the participants (4 out of 6) increased their scores following the intervention in which increases ranged from 1 to 4 points. Descriptive statistics, presented in Table 1, support this overall improvement. The increase in the mean (from 4.83 to 6.33) and the median (from 4.5 to 6.5) reveal that more than half of the participants improved their rubric scores significantly. Furthermore, the change in the mode from 4 to 5 indicates that the most frequent performance level among participants also improved, while the increase in range and standard deviation (from 0.98 to 1.21) suggests a higher variability in post intervention test scores, indicating that some students benefited more than others, the general tendency shows an advancement in their oral fluency.

Figure 1.

Fluency Rubric Total Score pre and post intervention tests



Note: Results were calculated based on the three criteria of the analytic fluency rubric (speed, pauses, and self-correction). The maximum achievable total score was 8. The labels (A, F, K, L, M, and V) correspond to the initial letters of the participants' names to keep confidentiality.

This improvement in students' fluency is consistent with Maley (2015), who stated the importance of creativity in supporting self-awareness and motivation when learning a language as well as being born from discipline. This idea was acknowledged by the participants, who demonstrated this discipline when repeatedly recording their audio notes until they achieved a result which they were satisfied with, a process that was not required but self-initiated. This allowed continuous practice of the use of the language, since the recordings were done before every session. As Dianelo et al. (2023) demonstrated, repetition can help students become familiar and engage more with their own stories, which leads to the second reason: the storytelling strategy used in class also allowed students to speak more during lesson time. They not only spoke during the reporting stage, but also when working

in pairs or groups for preparing the re-telling. Consequently, repetition, which is a key element of storytelling, allowed the participants to have more opportunities to use the language inside and outside the lesson time. By engaging in repeated narratives, the participants had enough opportunities to engage in their own learning.

Table 1.
Descriptive statistic results pre and post intervention tests

Total Score Pre		Total Score Post	
Mean	4.83	Mean	6.33
Median	4.5	Median	6.5
Mode	4	Mode	5
Range	2	Range	3
Standard Deviation	0.98	Standard Deviation	1.21

Note: Statistics are based on the individual total scores obtained from the three criteria of the analytic fluency rubric. All scores were rounded to two decimals.

The analysis of participants' speed, measured in words per minute (WPM), provided evidence of their increased fluency. For analysis purposes, the pre and post intervention test recordings were transcribed and manually verified to ensure accuracy, particularly given that participants' mispronunciations of words affected automatic transcription. Table 2 pre intervention and Table 3 post intervention show individual performance, including total word count, speech duration, and corresponding rubric score (ranging from 1, low fluency, to 3, high fluency).

Table 2.
Participants' speed results pre intervention test

Participant	Words	Length(min)	WPM	Score (rubric)
A	147	2.7	54.44	1
F	110	1	110	2
K	89	1.18	75.42	1
L	62	0.8	77.5	1
M	94	1.52	61.84	1
V	218	3.22	67.70	1

Note: Results were calculated based on the analytic fluency rubric. All words per minute (WPM) values were rounded to two decimals.

Table 3.
Participants' speed results post intervention tests

Participant	Words	Length (min)	WPM	Score (rubric)
A	89	1.23	72.35772	1
F	100	1.24	80.64516	2
K	139	1.2	115.8333	3
L	74	0.89	83.14607	2
M	87	1	87	2
V	152	2.28	66.66667	1

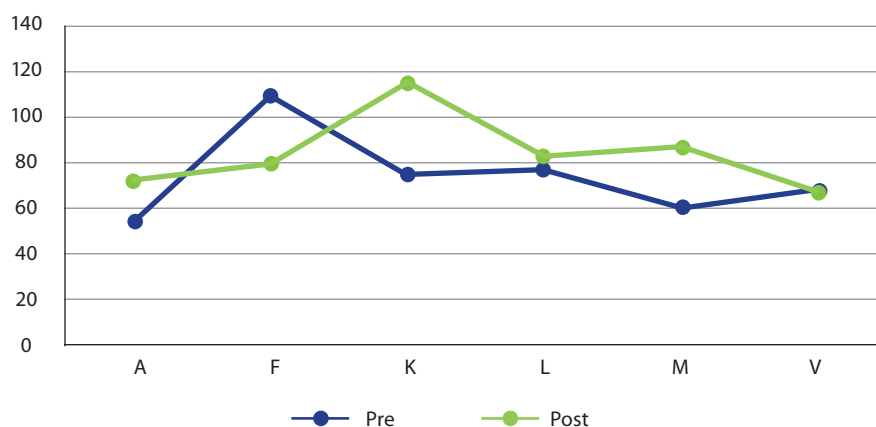
Note: Results were calculated based on the analytic fluency rubric. All words per minute (WPM) values were rounded to two decimals.

The comparison between pre and post intervention tests results revealed an increase in speech production. As shown in Figure 2, four out of six participants increased their WPM in the post intervention test. Although Participant A and Participant V showed a small reduction in WPM, this did not translate into a lower fluency score. These scores suggest that these minor variations in speed did not affect overall performance.

Furthermore, as it can be seen in Figure 3, three participants (L, M, and K) achieved higher fluency levels after the intervention, with Participant K demonstrating a notorious increase from level 1 (low fluency) to level 3 (high fluency). The remaining participants maintained their initial levels, and most importantly, no participants showed a decline in performance.

Figure 2.

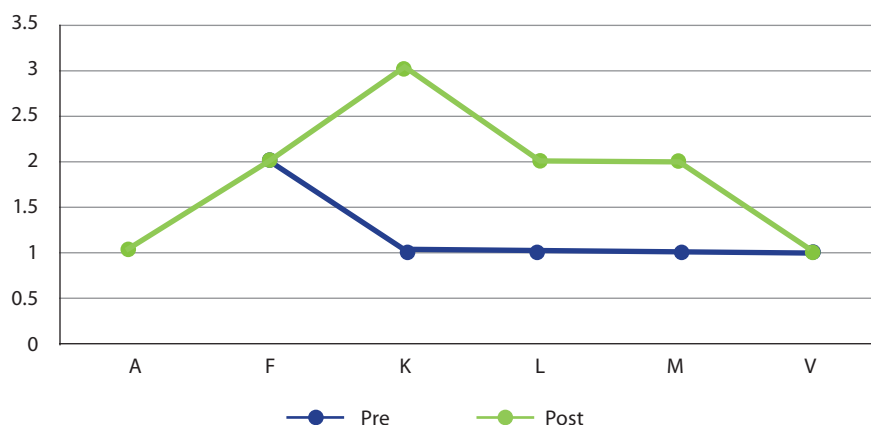
Participants' WPM pre and post intervention tests



Note: WPM = Words per minute. This figure compares the speaking rate of the six participants before and after the storytelling intervention.

Figure 3.

Participants' rubric pre and post intervention tests



Note: Scores are based on the analytic fluency rubric, ranging from 1 (low fluency) to 3 (high fluency).

This improvement in students' fluency scores may be explained by the opportunities for rehearsal and repeated language use, which was part of the storytelling tasks. The combination of planning, recording, and retelling facilitated automatization of language. As studies such as Purwasari and Nugraha (2023) and Qiu and Cheng's

(2022) have shown, the repetitive nature of storytelling served as a tool that supported students' fluency, by enabling them to articulate and orally express their thoughts as well as by helping them focus and improve their fluency, owing to speaking more. These findings in students' speed rate indicate that fluency development cannot be attributed to only an increase in their WPM, but to a combination of factors, including control over pauses and self-correction.

When looking at participants' number of pauses, the results illustrated a reduction in their number of long pauses, and an increase in their fluency scores, accordingly. The results were obtained by quantifying the number of unnatural pauses made. These pauses were measured with the use of the PRAAT software to calculate that their length was over one second, so they could be considered for the fluency rubric. The data presented in Tables 4 and 5 show a change in participants' use of pauses between the pre and post intervention tests. In the pre intervention results, most participants were classified at level 1 (low fluency), with only one participant reaching level 2. In contrast, the post intervention results indicate that the majority of participants improved, reaching level 2 (medium fluency), with only one participant remaining at level 1.

Table 4.

Students' pauses results in pre intervention test

Participant	Pre	Length	P/M	Score
A	11	2.7	4.07	1
F	5	1	5	1
K	8	1.18	6.77	1
L	3	0.8	3.75	2
M	12	1.52	7.89	1
V	20	3.22	6.21	1

Note: P/M = Pauses per minute. All P/M values were rounded to two decimals.

Table 5.

Participants' pauses in post intervention test

Participant	Post	Length	P/M	Score
A	5	1.23	4.06	1
F	4	1.24	3.22	2
K	2	1.2	1.66	2
L	2	0.89	2.24	2
M	4	1	4	2
V	8	2.28	3.50	2

Note: P/M = Pauses per minute. All P/M values were rounded to two decimals.

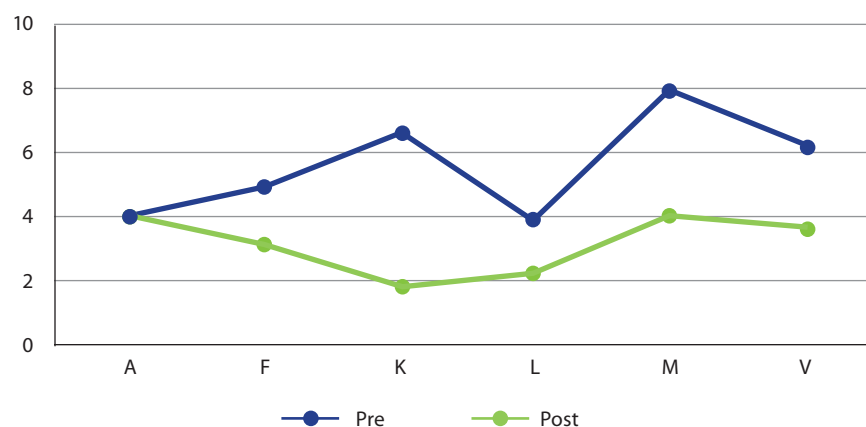
As observed in the comparative results, the intervention facilitated a reduction in their pause frequency. This may be grounded in the planning stage, which was part of every intervention session. Each intervention followed a TBL structure; therefore, during the pre-stage and task stage participants worked on their voice audios in order to prepare for the storytelling task, which, as seen in studies such as Córdoba Zúñiga et al. (2023), is believed to have an impact on the improvement of oral fluency. In this study, students also showed a progressive reduction in excessive pauses as well as an increase in their pace, as noted in tables 1 and 2.

As illustrated in Figure 4, there was a reduction in pauses per minute for most participants except for Participant A, who remained stable. Similarly, Figure 5 shows the evolution of rubric scores, where the majority of participants (F, K, M, and V) advanced from level 1 (low fluency) to level 2 (medium fluency), while participants A and L maintained their initial score. This suggests that smaller reductions in pauses were not sufficient to produce measurable differences in rubric scores.

Another aspect to consider, in addition to the effects of planning and TBL, is participants' familiarity with their own narratives. Considering the stories were original creations, the repetitive work done in class fostered a feeling of security when speaking in English. This aligns with Lee and Pak (2021), who determined that the use of storytelling fostered students' feeling of familiarity between stories and reality; consequently, they may have felt more at ease when speaking at the moment of the post intervention test, which resulted in more natural and fluent speech.

Figure 4.

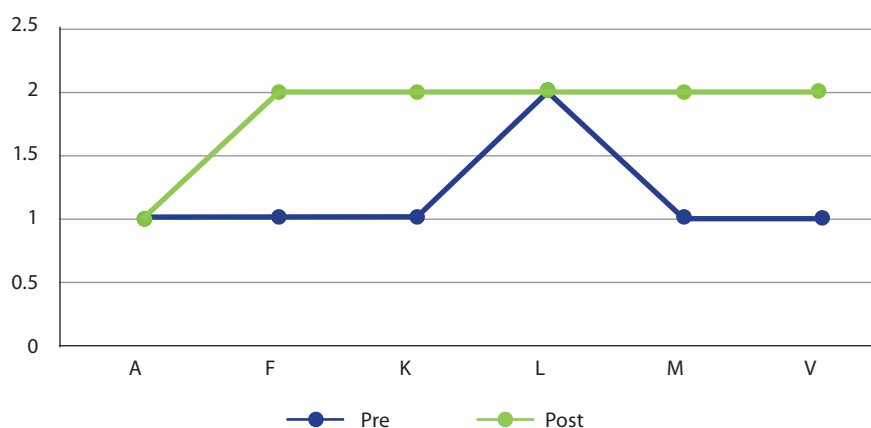
Participants' number of pauses per minute



Note: This figure illustrates the frequency of unnatural pauses (exceeding one second) per minute of speech for each participant.

Figure 5.

Participants' rubric score for pauses



Note: Scores are based on the analytic fluency rubric, ranging from 1 (low fluency) to 3 (high fluency).

In terms of the third fluency aspect analysed, the results demonstrated that participants' instances of self-correction did not change noticeably but remained at the same value. The difference was so minimal that did not show a different score in the fluency rubric. This third aspect focused on the frequency of self-corrections regarding vocabulary, grammar, and pronunciation. This was calculated by identifying instances of self-correction within the transcripts and audios and dividing them by the duration of speech to obtain the average of self-correction instances per minute.

As shown in Tables 6 and 7, instances of self-correction remained stable, and there was a minimal variation between the pre and post intervention tests. While Participant F, K, and M showed an increase in self-repair, they maintained their high-fluency score (level 3). On the other hand, participant L's score decreased, which was reflected in a higher frequency of self-correction instances during the post intervention test.

Table 6.

Participants' self-correction instances in pre intervention test

Participant	SC	Length	SC/M	Score
A	0	2.7	0	3
F	0	1	0	3
K	3	1.18	2.54	2
L	0	0.8	0	3
M	6	1.52	3.94	2
V	10	3.22	3.10	2

Note: SC = Self-correction instances. All SC/M values were rounded to two decimals.

Table 7.

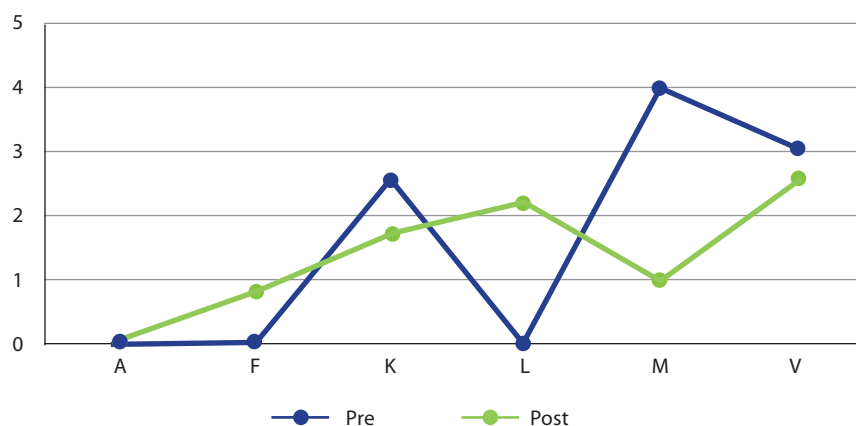
Participants' self-correction instances post intervention test

Participant	Post	Length	SC/M	Score
A	0	1.23	0	3
F	1	1.24	0.80	3
K	2	1.2	1.66	3
L	2	0.89	2.24	2
M	1	1	1	3
V	6	2.28	2.63	2

Note: SC = Self-correction instances. All SC/M values were rounded to two decimals.

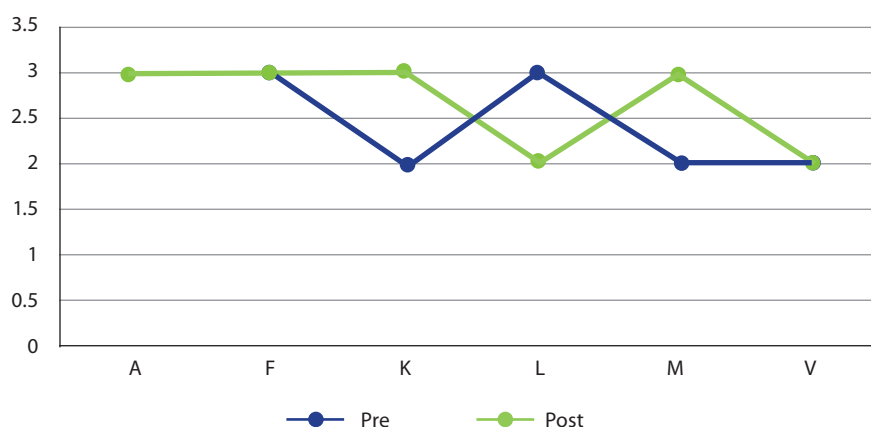
As illustrated in Figures 6 and 7 there was more variability in participants' scores, and participants F and L increased their self-correction instances in the post intervention test. However, these results were insufficient to impact the rubric scores. This is the first aspect in which there was not a notorious increase in students' fluency. This suggests that, unlike speed and pauses, self-correction did not have a positive impact during the intervention.

Figure 6.
Self-correction instances per minute pre and post intervention tests



Note: This figure shows the frequency of self-corrections instances identified

Figure 7.
Self-correction instances rubric score pre and post intervention tests.



Note: Scores are based on the analytic fluency rubric, where 1 represents low fluency (high frequency of self-correction), 2 represents medium fluency, and 3 represents high fluency (low frequency of self-correction).

Participants' self-correction instances were less frequent than other fluency aspects analysed in this study. One possible explanation for this stability is that self-correction is less related to fluency development and more connected to learners' monitoring processes. In this sense, the findings support Tavakoli and Skehan (2005), who argue that self-repair is independent to processing speed. The results of this study reinforce this view of seeing both aspects as one, as reductions in pauses were not accompanied by notorious reductions in self-correction.

Several authors such as Suzuki et al. (2021) and Williams (2023) expressed their apprehension of seeing both aspects separately since one aspect might lead to the other. Thus, the reduction of pauses showed in the post intervention test could be seen as a way in which participants reduced their instances of self-monitoring. Consequently, despite students' increased awareness of fluency through the use of checklists during the intervention, they might have decided to not correct themselves. This prioritization of continuous speech is

explained by Duran-Karaoz and Tavakoli (2020) who suggest that self-monitoring and repair are influenced by individual preferences and task demands.

The analysis of the results obtained for specific objective number 1 has shown that most participants performed better in the post intervention test by scoring higher in the fluency rubric. The result of every criterion illustrated that most participants uttered more WPM, made less pauses of over a second long, and there were less instances of self-correction. It is also worth noting that those participants who did not score higher, remained at the same level; thus, none of the participants demonstrated a decrease in any fluency aspect. It can be stated that participants' fluency showed an increase, first and foremost, due to the rehearsing and repeating of a certain dynamic in every lesson, which Newton and Nation (2021) recommend as a useful technique for developing fluency. Secondly, students' familiarity with their own stories and familiarity of speaking in every class may have helped them feel more confident in their speech; consequently, making fewer long pauses and instances of self-correction. This was noted by Heathfield (2015), who stated that telling stories is the longest piece of uninterrupted speech spoken by students, and that these tasks enhance their confidence with the language owing to the fact that clarity and fluency are more important in storytelling than accuracy, so students worried less about making mistakes but focused more on expressing their thoughts.

Regarding the second specific objective, photovoice was used to explore participants' perceptions of the storytelling intervention and its impact on their fluency. The analysis aimed to capture the range of participants' experience. Given the small sample size and short responses, the findings were organized into three main dimensions: emotional responses to storytelling, perceptions of the voice notes recording, and their self-perceptions of their fluency development.

The data presented in Table 8 illustrates how participants experienced both affective challenges and positive engagement throughout the intervention. On the one hand, many participants expressed feelings of anxiety, cognitive blocks, and difficulty recalling ideas during the storytelling tasks. This is exemplified in Figure 8, where a participant visually represented nervousness and difficulty recalling words during the task. These comments appear to be linked to an increase in their metacognitive awareness, as learners became more conscious of their language use and possible errors. This interpretation aligns with Bailey (2020) who highlights the impact of anxiety on oral performance, particularly in tasks requiring extended speech. On the other hand, participants also expressed positive emotional responses, such as enjoyment, freedom, and a sense of achievement. These contrasting perceptions suggest that storytelling created a learning environment in which anxiety and increasing confidence were present. This supports the view that storytelling can foster a more meaningful and motivating context for language use.

Table 8.

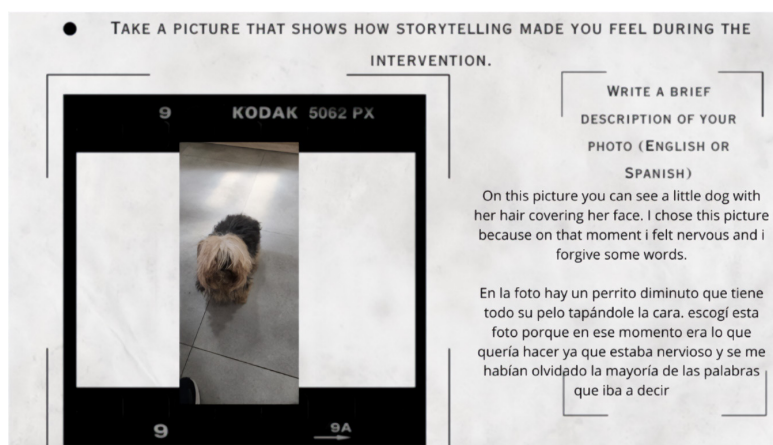
Photovoice first dimension participants' results

Dimension	Category	Sub-category	Examples
Take a picture that shows how storytelling made you feel during the intervention.	Performance challenges	Anxiety	"I felt very anxious... I forget the text, so I improvised"
		Cognitive block	"I felt nervous and I forgave (forgot) some words." "I didn't remember a lot of information."
	In the moment strategies	Spontaneous expression	"I think my mind was a white paper because I just talk..."
		Metacognitive awareness	"...and then I am thinking what I say was correct or not."
	Emotional outcome	Freedom and Fun	"Storytelling it makes me feel so free... that's the funny part."
		Joy in the learning process	"I feel really happy because I like so much learning English, and every step I take I feel like I learn a lot more."

Note: Categories and subcategories were derived from participants' photovoice responses.

Figure 8.

Participant representation of anxiety and difficulty in lexical retrieval during storytelling (Photovoice).



Source: Own elaboration based on Photovoice data collected during the intervention.

The second dimension, related to the recording of the audio messages, highlighted the central role of planning and repetition as learning strategies. These recordings were done individually at home and based on a prompt given by the teacher. Moreover, participants had to consider their partners' audios so as to continue with the plot of the story. As table 9 shows, participants reported preparing and re-recording their audios multiple times, indicating a high level of engagement and responsibility with the task. This behavior suggests that learners took an active role in their own language production, which may have contributed to the fluency improvements observed in the results from specific objective 1. As Tavakoli and Wright (2020) argue, planning time plays a crucial role in supporting language production by facilitating access to linguistic resources and improving overall performance.

Table 9.

Photovoice second dimension participants' responses

Dimension	Category	Sub-category	Examples
Take a picture of how you felt while recording the voice notes and sharing them through WhatsApp with the class	Preparation strategies	Deliberate planning	"Always I prepared mi voice note, because the improvisation is not for me." "Sometimes I was writing before recording but I usually think o write before talking."
		Spontaneity	"I felt relaxing because I don't prepare a lot how I Say (what I'm going to say)"
	In-action views	Low-pressure environment	"I felt like him [a relaxing cat] because i can practice and think better before record the voice notes."
		Roleplaying	"I felt like an announcer of a podcast" "when (I) recorded the audio, I felt like on a podcast"
	After recording views	Self-perception	"...but I think My partners Sound better than me."
			"I'm practicing a lot and I feel better."

Note: Categories and subcategories were derived from participants' photovoice responses.

As Figure 9 illustrates, participants planned and rehearsed their recordings, often associating the task with producing a podcast. This perception was described as a low-pressure and even enjoyable experience, which may have reduced performance anxiety and encouraged more fluent language use. Similar findings were reported by Albogamy and Algethami (2022), who found that the use of WhatsApp voice note recordings in storytelling influenced students' confidence and perceptions of their own fluency positively.

Figure 9.

Participant representation of planning and rehearsal through a "podcast-like" storytelling process (Photovoice).



Source: Own elaboration based on Photovoice data collected during the intervention.

The third dimension sought to gain insight into participants' own perceptions towards their fluency after the intervention concluded. As shown in Table 10, participants demonstrated a high degree of self-awareness regarding their fluency and accuracy performance. Many learners identified specific difficulties, such as overthinking grammar rules, which they associated with increased pauses and reduced speed in their speech as well as nervousness. At the same time, they expressed confidence in their ability to improve, highlighting a sense of optimism and achievement. This suggests that the intervention not only impacted performance but also promoted reflective learning, allowing students to understand their own strengths and limitations.

Table 10.

Photovoice third dimension participants' responses

Dimension	Category	Sub-category	Examples
Take a picture that represents how you felt about your oral fluency (speed, pauses, self-correction) after the intervention	Self-awareness	Fluency	"I feel I don't have a good fluency but if I efforce. (put some effort) I can change that."
		Accuracy	"...I thought a lot on rules, times and that's made me started with pauses, lost speed and fluency."
	Self-perception	Confidence	"I'm proud of me because I've improved a lot, at the beginning I'm nervous, and I laughed a lot. but in this moment, I feel safe."
		Insecurities	"I felt nervous, because the most insignificant mistake makes me overthink"

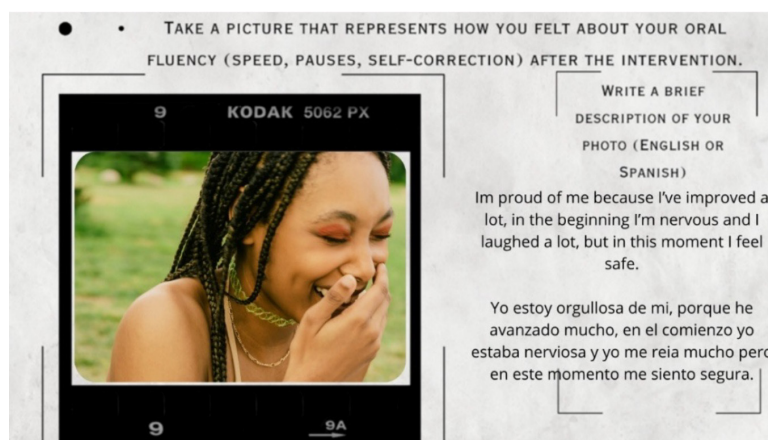
Note: Categories and subcategories were derived from participants' photovoice responses.

The positive emotional responses reported by participants support the effectiveness of storytelling in adult language learning contexts. Learners expressed feelings of freedom, enjoyment, and satisfaction when engaging in the creation and retelling of their stories, suggesting that the intervention fostered an engaging learning experience. These perceptions may be linked not only to the nature of storytelling as a creative activity, but also to participants' intrinsic motivation, as they had voluntarily enrolled in the language course. As Dörnyei and Ushioda (2011) state, motivated learners are more likely to invest in effort and sustain it over time. This was reflected in participants' willingness to repeatedly record their audio voice notes, which were done outside of class time. This was essential for the successful implementation of storytelling activities. Without this, the continuity of the intervention would not have been possible.

Additionally, participants reported increased confidence in their ability to improve their performance, with some indicating that they felt more prepared to face real-life speaking situations. As illustrated in Figure 10, one participant represented this transition by expressing increased confidence and a sense of safety after the intervention. These perceptions suggest that storytelling not only supported fluency development but also contributed to learners' self-efficacy. Similar outcomes were shown in previous studies by Putri et al. (2021) and Sandry and Supramaniam (2024), where storytelling activities were associated with increased confidence and a reduced fear of making mistakes.

Figure 10.

Participant representation of increased confidence and reduced anxiety after the intervention (Photovoice).



Source: Own elaboration based on Photovoice data collected during the intervention.

Overall, participants' responses highlighted the role of planning as a strategy for speaking, both when recording the audios and when retelling their stories in class. At the same time, they revealed the presence of affective factors such as insecurity, anxiety, and nervousness, particularly when learners focused on accuracy. Despite these challenges, storytelling and audio recording were perceived as a safe, engaging, and enjoyable experience. The novelty of the tasks and the opportunity to create and share their own stories appeared to foster motivation and positive engagement, even when participants compared their performance to their classmates. Finally, although accuracy was not the primary focus of this study, these findings suggest that storytelling may have had a broader impact on participants' overall speaking performance. By combining planning, repetition, and meaningful communication, the intervention supported not only fluency development but also learners' confidence and willingness to communicate.

CONCLUSIONS

The purpose of this action research was to analyse the use of storytelling through WhatsApp voice notes on participants' speaking fluency. Overall, the findings indicate a positive contribution in both participants' oral fluency and their perception of their speaking performance.

The analysis of the first specific objective demonstrated an increase in most participants' fluency score, particularly regarding the number of words per minute and reduction of pauses. These findings suggest that storytelling tasks, combined with asynchronous voice notes recording, promoted more continuous speech production. Participants maintained and increased their scores, hence their oral fluency. This aligns with previous research as Newton and Nation's (2021) perspective on the role of meaningful communication and repeated practice in developing fluency. However, results related to self-correction should be analyzed individually, as they were less consistent. This finding can be interpreted through the study conducted by Ahmadian et al. (2012), who argue that more structured tasks promote learners' focus on form (grammar, vocabulary and pronunciation), whereas meaning focus tasks, as storytelling, prioritize meaning over accuracy. Consequently, the results obtained may reflect the nature of the pre and post intervention tasks, which encourage more continuous speech.

In relation to the second specific objective, the qualitative findings from the *Photovoice* instrument revealed a combination of affective factors and language production. Participants initially expressed feelings of anxiety, nervousness, and insecurity; however, these perceptions moved towards enjoyment, confidence, and a sense of achievement. The nature of the storytelling task, referred to as a podcast roleplay, created a low-pressure environment that appeared to reduce performance anxiety, which is a common barrier in adult English language teaching (Bailey, 2020). This aligns with perspectives that emphasize the importance of lowering affective filters to facilitate language acquisition. Additionally, the findings demonstrated that learners relied on planning as a primary strategy to approach their tasks. While this tendency may be influenced by traditional grammar-focused experiences as well as the fear of not being as good as their classmates, it allowed learners to move towards a more confident language use. These comments may also reflect the stage they were in at the moment of doing the photovoice. Participants were finalizing their semester course so they may not only be referring to the end of the intervention, but the course itself.

The intervention not only supported fluency development but also fostered emotional engagement with speaking. By integrating familiar digital tools such as WhatsApp voice notes, this study shows how technology can help bridge the gap between structured classroom instruction and more autonomous, low-anxiety language practice. Furthermore, the use of asynchronous voice recording may reduce the cognitive load associated with real-time oral production, allowing adult learners to plan, improve, and perform their speech with greater confidence. In conclusion, the positive results obtained can be attributed to a combination of factors; an engaging intervention, an easy to access and use tool that is part of their daily life, and principally to a highly motivated and committed group of participants. This combination enhanced the benefits of storytelling and resulted in a positive impact on their oral fluency.

The primary recommendation arising from this study is the need for further research into the implications of the use of storytelling through WhatsApp voice notes in students' accuracy performance. This action research aimed to focus on adult learners' fluency; nonetheless, participants still expressed their worries of making mistakes since it is an aspect that is engrained from past educational experiences. Additionally, the findings also have important implications for teaching practice. Teachers working with adult learners should incorporate low-pressure, collaborative speaking tasks that allow time for planning and reflection, as these may help reduce anxiety and promote more active participation.

Regarding methodology, further studies should investigate the use of other recording tools for story creations, especially those which can assure a safe platform for teenagers. The creation of stories is an opportunity for adolescents to express their ideas in a different and creative way. Although WhatsApp offered a familiar platform

for adult learners, teenagers' use is less frequent, so social networking apps such as Instagram, which also allow audio recording and group creation, can serve as an alternative. Nonetheless, these widely used apps may raise parental concerns regarding inappropriate use. This emphasizes the need for tools that are pedagogical, but that can resemble the familiarity of other apps so students do not see it as only an educational tool, but as one that can be motivating to use after class without the tediousness of homework assignments.

Finally, new insights could be gained from replicating the intervention into a larger and more diverse sample. The limited scope of this action research prevents the generalization of the positive results obtained. Extending the intervention to a semester or an entire academic year can provide clearer results into the long-term benefits and or potential limitations of storytelling through WhatsApp voice notes to support speaking fluency.

AUTHOR CONTRIBUTIONS

Daniela Valenzuela Rodríguez: data curation, formal analysis, research, methodology, project administration, resources, software, visualization, writing – original draft, writing – review and editing.

Claudio Díaz Larenas: conceptualization, funding acquisition, supervision, validation, visualization, writing – review and editing.

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