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Modified 4-3-2 Technique: Evaluating the Speaking Performance of English as a Foreign Language Learners in Virtual Classrooms

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Abstract*—This study explored how a modified version of the 4-3-2 technique can influence the speaking performance of English as a Foreign Language (EFL) learners in virtual classrooms. It examined changes in lexical complexity, syntactic complexity, grammatical accuracy, and fluency across three iterations (4, 3, and 2 minutes) of a speaking task, with corrective feedback provided between attempts. Qualitative design was used in the study. Five EFL learners engaged in one-to-one virtual speaking tasks conducted with the researcher. In total, fifteen speech transcripts were collected and analyzed through qualitative content analysis. Using a coding scheme based on the CAF framework, the study closely identified shifts in complexity, accuracy, and fluency. This approach offered a detailed examination at how learners' speaking performance shifted over time using the modified 4-3-2 technique. Findings revealed that fluency showed the most consistent improvement. Learners became noticeably more fluent, speaking with greater ease, minimized awkward pauses, and decreased reliance on fillers as the tasks progressed. Lexical and syntactic complexity improved moderately but inconsistently. Some learners expanded their vocabulary but their sentence structures remained fairly familiar and repetitive. Grammatical accuracy remained the least affected. Despite receiving corrective feedback, errors in word order, use of prepositions and articles, and subject-verb agreement persisted which indicated a fluency–accuracy trade-off under time pressure. This study concludes that the modified 4-3-2 technique positively influences EFL learners' speaking performance in virtual classrooms, particularly in enhancing fluency. While the technique showed modest impact on complexity and accuracy, this outcome highlights the need for further pedagogical modifications when targeting deeper linguistic development. This study recommends that language teachers use the modified 4-3-2 technique to support fluency development in virtual classrooms. To enhance complexity and accuracy, they may integrate targeted focused grammar instruction, structured pre-task planning, and targeted and differentiated feedback strategies. Future investigations may explore additional modifications of the 4-3-2 cycle and assess long-term effects in virtual EFL contexts.*

***Keywords*—** *Modified 4-3-2 technique, speaking performance, EFL learners, virtual classrooms, CAF framework.*

I. INTRODUCTION

English is now the language spoken by the majority of the world's population and is essential for commerce, education, and diplomacy (Patel, 2023). English is a key subject in many countries, including China; thus, Chinese learners typically study English as a Foreign Language (EFL). Based on Kachru's Three Concentric Circles model, China belongs to the Expanding Circle—where English is not used as a native or second language but is gaining importance for global engagement (Al-Mutairi, 2019). English education in China has undergone decades of reforms; however, many EFL learners struggle with speaking skills. They often have strong receptive skills such as reading and listening. Nonetheless, they find it challenging to speak the language fluently. This phenomenon is called "dumb English" (Huang, 2024a, 2024b; G. Zhang & Lu, 2024). Although speaking is an important part of language learning, many EFL learners find it challenging to practice due to a lack of opportunities outside the classroom (Amoah & Yeboah, 2021; Navidinia et al., 2019; G. Zhang & Lu, 2024). Common problems are less confidence, limited vocabulary, and inability to handle varied topics (Chea, 2024). These obstacles often lead to further challenges in idea development, language use, and speech organization, all of which challenge effective communication (Zeng, 2020).

Task repetition is a key method to enhance speaking (Bygate, 2018). Among the established techniques, the 4-3-2 technique (Nation, 1989) remains one of the most implemented in language classrooms. This technique involves repeating the same speech task under decreasing time limits. This pushes learners to enhance fluency, recall, and organization (Lambert et al., 2017). It is effective in traditional classrooms. However, its application in one-to-one virtual EFL classrooms is yet to be investigated. With interactive features and feedback, virtual classrooms allow for real-time learning (Berry, 2019; Dooly & Vinagre, 2022; El Morabit & Manegre, 2023). However, the lack of spontaneous dialogue and practice raise important questions about EFL learners adapt their speaking in these virtual classes, and whether task repetition techniques like 4/3/2 remain effective under such setting.

As a virtual EFL teacher, the researcher acknowledges the essential role of speaking tasks to foster fluency, accuracy, and complexity in virtual classrooms. Well-designed speaking tasks provide a clear framework, set expectations, and reduce mental demands (Lambert et al., 2017; Lee, 2018). This becomes especially important in virtual settings, where opportunities for spontaneous conversation are limited and learners may struggle to engage in unstructured and interactive speaking practice.

The modified 4-3-2 technique—combining feedback between iterations—presents a promising approach for enhancing spoken language performance. This study aimed to

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investigate how the modified version 4-3-2 technique influences the speaking performance of EFL learners in virtual classrooms, with particular focus on changes in fluency, accuracy, and lexical and syntactic complexity over time.

1.1 Statement of the Problem

Problem/s which were addressed by the research

The research questions are formulated as follows:

Primary Question:

How does the modified 4-3-2 technique influence the speaking performance of English as a Foreign Language (EFL) learners in virtual classrooms?

Secondary Questions:

1. How does the modified 4-3-2 technique influence lexical complexity?
2. How does the modified 4-3-2 technique impact syntactic complexity?
3. In what ways does the modified 4-3-2 technique influence the grammatical accuracy?
4. How do virtual EFL learners demonstrate changes in fluency?

II. Methodology

Qualitative design was used in the study. Five EFL learners engaged in one-to-one virtual speaking tasks conducted with the researcher. In total, fifteen speech transcripts were collected and analyzed through qualitative content analysis. Using a coding scheme based on the CAF framework, the study closely identified shifts in complexity, accuracy, and fluency. This approach offered a detailed examination at how learners' speaking performance shifted over time using the modified 4-3-2 technique.

III. Results and Discussion

This chapter deals with the findings and discussions from an analysis of EFL learners' speaking performance in a speaking task based on the modified 4-3-2 technique.

The study investigated the impact of the modified 4-3-2 technique on EFL learners' speaking performance in virtual classrooms, using a qualitative evaluation guided by the CAF framework. This study employed QCA (Krippendorff, 2019) by using a deductive coding approach with predefined CAF-based coding scheme. Using a deductive coding methodology, we evaluated lexical complexity, syntactic complexity, grammatical correctness, and fluency over three speaking repetitions. The influence of the virtual classroom context is examined as a factor shaping learner outcomes. This study contributes to understanding how task-based speaking techniques can be effectively adapted to virtual settings.

The below section presents the individual findings, discussions, and implications on lexical complexity, syntactic complexity, accuracy, and fluency. These four are the main categories of speaking performance assessed in the current investigation.

Findings on Lexical Complexity

The growth of lexical complexity is the first major aspect of speaking proficiency. This includes the variety and richness of vocabulary choices that learners employ (Housen et al., 2012; Housen, 2021; Kuiken, 2022).

In this study, lexical complexity was assessed through three coded dimensions: variety, which refers to vocabulary repetition or expansion, appropriateness, referring to natural word choices; and referential cohesion, otherwise called reference clarity (see coding scheme on Appendix E).

Four key patterns emerged. First, there is a gradual increase in lexical variation. Second, there were persistent unnatural word use with minor refinements. Third, there were observed improvements in reference clarity. Last, there were differences in improvement amongst the participants. These findings explain how virtual learners develop their vocabulary in relation to task repetition and feedback.

Gradual increase in lexical variation

As all five speakers progressed through the 4-3-2 speaking task, changes in lexical variety were observed. All speakers in the first iteration depended on repeating words to fill pauses. Speaker 1, for example, usually repeated keyword terms while Speaker 2 relied largely on generic descriptive and topic-specific terms. Speakers 3, 4, and 5 also exhibited a similar pattern of lexical recurrence; they usually relied on a limited lexical set across the four-minute speech.

Most speakers began to include alterations in their word selections by the second iteration even if the overall vocabulary range remained limited. For example, Speaker 2 included fresh terminology to indicate slight modifications; nonetheless, crucial terms were still overused. Additionally, Speaker 4's use of increasingly specific terms shows an expanding vocabulary.

The third iteration showed a clear attempt of speakers to expand their vocabulary. For instance, Speaker 1 included new descriptors whereas Speaker 3 demonstrated increased lexical variety by using various words and less importance repetition. Through more abstract thought and improved transitions, Speaker 2 expanded their word choices.

The excerpts below illustrate the gradual change in lexical variation. However, it is important to note that these observed changes are modest in nature.

Speaker 2:"It had a very incredible opening... (1st iteration)

"I was totally impressed by the second one, because after watching that one, I felt this movie is very amusing and has a lot of values…." (2nd iteration)

"Personally, I like NeZha two better. This is because I totally get the main core and core value that the director wanted to deliver to us. (3rd iteration)

The excerpts above illustrate how Speaker 2 varied their lexical choices as the task progressed. Initially, they relied on basic descriptive words. By the second iteration, they incorporated more varied vocabulary. In the final iteration, the speaker refined their phrasing; they used more specific terms instead of the more general descriptions. This shift shows an attempt at choosing more precise lexical choices.

Speaker 5:"… made our memory more uh more heartful. " (1st iteration)

"… to make our memory more meaningful." (2nd iteration)

"… in order to make our memory more meaningful… (3rd iteration)

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The excerpts above demonstrate an expansion in general descriptives. In the first iteration, the speaker used limited vocabulary and incorrectly used the term. However, by the second iteration, they adopted a more precise word choice. Then in the third iteration, the speaker further refined their expression by producing a grammatically correct phrase.

Despite these observed changes, most speakers continue to rely on a relatively narrow set of words and only minor expansions throughout the iterations. Thus, the improvement in lexical diversity remained minimal.

Persistent unnatural word use with minor refinements.

Some of the most persistent issues across all speakers was the unnatural collocations, incorrect word forms, and awkward phrasings. In the first iteration, Speaker 1 produced awkward constructions such as “bank river” instead of “riverbank” and “ice crapers” instead of “skyscrapers.” Similarly, Speaker 3 struggled with unnatural phrasing, using expressions like “method travel” and “my opinion is save.” This pattern was consistent across all speakers, with Speaker 5 producing unnatural phrases such as “made our memory more heartful” in their first attempt.

In addition, feedback sessions gave learners the chance to refine their phrasing; however, progress was inconsistent. By the second iteration, some refinement was evident, though awkward expressions continued to surface.

Speaker 2, for instance, still exhibited unnatural phrasing, as seen in the redundant phrase, “The name of that movie is called Sequel: NeZha.” While minor improvements were noted in the third iteration, unnatural collocations remained. Speaker 4, for example, produced the incorrect phrase, “We are very click,” while Speaker 3 continued to use phrases like “rent a taxi car.” Even though some speakers, such as Speaker 1, used less observable unnatural expressions by the third iteration, none of the participants fully eliminated awkward phrasing.

The excerpts below illustrate these patterns. They mostly demonstrate how some word choices remained strange throughout three iterations.

Speaker 4: “for make a budget of the spending… (1st iteration)

"…it give us more flexible than…"(1st iteration)

"…track different locations of travelling spot on the Google Map.” (2nd iteration)

"the experience like last year we travelled…" (2nd iteration)

“We are very click." (3rd iteration)

"We just cost a little in …" (3rd iteration)

The excerpts reveal forced or awkward word choices that affect natural phrasing. In the first iteration, Speaker 4 used incorrect word forms and unnatural collocations. The second iteration shows some refinement, but Speaker 4 still used awkward expressions. By the third iteration, even though clarity improved, errors remained. While Speaker 4’s phrasing became more precise, they still used unnatural expressions and showed grammatical inconsistencies. Across three iterations, speakers struggled with lexical choices. The persistent unnatural word choice affected overall coherence.

Improvements in reference clarity over time

In addition to lexical repetition and unnatural phrasing, another common challenge was the clarity of references. In the first iteration, several speakers struggled to maintain clear and consistent references. For example, Speaker 1 showed unclear and inconsistent reference between “Shanghai” and “Huangpu River”, while Speaker 5 frequently shifted between pronouns, inconsistently using “we,” “I,” “our,” and “us.” Speaker 4 also had issues with inconsistent pronoun use, switching between “I” and “we” in an unclear manner.

By the second iteration, a slight improvement in reference clarity was observed; however, inconsistencies persisted. Speaker 4, for instance, became more consistent in pronoun use but still had difficulty distinguishing between singular and plural forms, as seen in the confusion between “friend” and “friends.”

In the third iteration, most speakers showed better cohesion, as seen in Speaker 4’s ability to maintain a consistent reference to “we” when discussing shared experiences. Speaker 1 also showed clear referencing throughout their final delivery.

The excerpts below show the improvement in clarity of references.

Speaker 1: "there is a very large river across the Shanghai," (1st iteration)

"That named Huangpu river…” (1st iteration)

"this new apartment is very near to the bank river, that Huangpu River." (2nd iteration)

"The most, largest river in Shanghai, name Huangpu, oh, called, give me a min–called Huangpu river." (2nd iteration)

"Huangpu river is the largest river in Shanghai. It's more than 100 kilometers." (3rd iteration)

The excerpts above reveal inconsistencies and imprecise references when describing locations. In the first iteration, the unclear and awkward phrasing made the references difficult to follow. The second iteration shows some self-correction which indicates an effort to improve accuracy; however, hesitations still disrupt fluency. By the third iteration, Speaker 1’s phrasing becomes more precise and structured, with direct statements. In short, the minimal changes somehow reflect a growing control over lexical accuracy.

In contrast, some challenges remained, particularly in timeline inconsistencies, as seen in Speaker 5’s reference shifts, which still caused ambiguity.

Speaker 5: “… we have been to travel to Thailand 10 years ago.” (1st iteration)

“Shall we went to- shall we go to Thailand the second time as the 10 years later?” (1st iteration)

“… to er spend in Chiang Mai together at the last weekend of last year.” (2nd iteration)

“… to spend er the last weekend 2024 together in Thailand.” (3rd iteration)

“… And er at the- at the another day, we- we back to China, back to our cities.” (3rd iteration)

The excerpts from all iterations of Speaker 5, as shown above, reveal inconsistencies in timeline and imprecise temporal references. In the first attempt, the unclear phrasing made it difficult to follow the sequencing of past events. The second iteration shows some improvement, with a more

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structured reference to time; however, the phrasing remains somewhat ambiguous. By the third iteration, the time references became more structured, with clearer expressions; although errors still persisted. Even so, the minimal changes across speeches reflect an increasing awareness of how to structure time references more accurately.

Overall, the minimal changes in reference clarity reveal a growing ability to use more precise and consistent linguistic structures across iterations.

Variation in lexical improvement among speakers

Lexical development varied among participants; some exhibited noticeable refinement while others demonstrated minimal changes across iterations. Speakers 1 and 2, for instance, showed the most substantial lexical expansion. Both gradually added a broader range of vocabulary, refined their phrasing, and demonstrated greater lexical precision. Even though occasional unnatural word choices persisted, they were less pronounced by the final iteration.

Notably, Speaker 2 showed an increased ability to employ abstract reasoning and structured discourse markers. In addition, Speaker 3 displayed modest changes in lexical complexity, as evidenced by minimized word repetition and better clarity in reference tracking. However, awkward phrasing remained evident across all iterations. This means that challenges in lexical control continued.

Finally, Speakers 4 and 5 exhibited the least variation in lexical complexity. These speakers remained reliant on a limited lexical repertoire. They often repeated lexical choices and rarely introduced new vocabulary. Even though slight lexical expansion was observed, unnatural phrasing and inconsistent reference use persisted throughout all three iterations.

Discussion

This discussion answers the first in the secondary research questions.

The progressive rise in lexical variety that was seen is consistent with the anticipated advantages of task repetition and feedback. The original 4-3-2 technique (Nation, 1989) encourages increased fluency by reducing cognitive load through repetition. As Fukuta (2016) noted, this allows speakers to allocate more attention to lexical choices.

Accordingly, the notion of task repetition aligns with the principle that repeated practice converts declarative knowledge, referring to the use of explicit rules, into procedural knowledge, the implicit and rabid use of rules (DeKeyser, 2018a, 2020b).

The observed changes in lexical choices in the present study is consistent with Kim et al., (2018), who observed that task repetition led to increased use of less frequent and more advanced vocabulary, as learners had more opportunities to refine their lexical choices across iterations. It also aligns with findings from Fukuta (2016), who noted that even though task repetition enhanced vocabulary choice over time, this improvement was not always substantial for all learners.

In this study, the modified version, which adds feedback, appears to have played a role in prompting minor changes in lexical complexity. Since the corrective feedback was given after the first and third iteration, speakers were given chances to reflect on their lexical choices and experiment with alternative word usage, especially when delivering their second and third speeches. This aligns with Swain's (1985) Output Hypothesis: Feedback in between iterations pushes learners to 'notice gaps' (e.g., unnatural phrasing) and experiment with alternatives (Pannell et al., 2017).

The shifts in reference clarity also suggest that the time pressure of the 4-3-2 task may have potentially pushed learners toward more efficient speech structuring. This aligns with studies such as Thai & Boers (2016). In short, as speakers deliver increasingly shorter versions of their speeches, such as the 3-minute and 2-minute speeches, and with feedback in between these attempts, the pressure possibly made the speakers more aware of their pronoun use and referential cohesion. However, the inconsistencies throughout iterations, such as unclear pronoun shifts and timeline ambiguities, suggest that even though the technique encouraged self-monitoring, it did not fully resolve underlying lexical challenges.

Levelt's (1989) formulation stage and Skehan' (2015) Limited Attention

Capacity explains why referential clarity improved but not fully. Under time pressure, the speakers' attention and resources are diverted to other linguistic aspects. That is why these speakers defaulted to high-frequency forms (e.g., "he"/"it") and showed confusion in how they are used. In addition, the virtual setting's cognitive load likely exacerbated this imbalance. This means that without extended practice cycles, i.e. beyond three iterations, and limited speaking practice, which in the present study is a 25-minute session, these speakers lacked the 'deliberate practice' needed to proceduralize discourse-level adjustments (DeKeyser, 2020b).

Accordingly, some speakers continued to show unnatural lexical choices even after feedback was provided. This persistence means that while these speakers were exposed to feedback, there is an inconsistency in how they effectively integrate these corrections. This phenomenon can possibly be attributed to interlanguage development. This means that learners in early 'controlled processing' phases may rely on direct translations from their first language or internalized incorrect word combinations, also known as fossilized errors (DeKeyser, 2020b; Y. Suzuki, 2024b).

The decreasing time frame in the modified 4-3-2 technique builds pressure in delivery. It is highly possible that it may have overloaded working memory; limiting deeper lexical processing in the formulation stage. Ultimately, the cognitive demands of spontaneous speaking may also have prevented the learners from fully internalizing corrections in their lexical choices given through feedback (Sweller et al., 2022).

The one-to-one virtual format may also have played a role. According to Al-Qahtani (2020), virtual classrooms have limited interaction time; without peer and collaborative discussions. That said, learners had fewer opportunities to improve their vocabulary, as observed in the present study's virtual classes. Sreehari et al. (2019) stated that the virtual classroom's individualized nature may have limited real-time peer clarification. This meant that some of the observed

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inconsistencies in the present persisted even after feedback during the task mainly because of limited interaction.

Analysis demonstrates that while repetition fosters familiarity with the task, short speaking intervals, the decreasing time limit of the task (Bozorgian & Kanani, 2017; Thai & Boers, 2016), and time constraints in the virtual setting may have limited learners' ability to incorporate a broader range of vocabulary (Berry, 2019; Yilmaz, 2015). The Limited Attention Capacity accounts for the persistence of repetitive vocabulary. This means that learners sacrificed attempting to use varied lexical choices in order to meet other linguistic demands under time constraints. This phenomenon echoes with the tension in the CAF framework, as emphasized by Skehan (2015).

The variability in lexical improvement across participants highlights the influence of individual learner factors. Variability in lexical growth mirrors the CAF framework's dynamic interplay: High-proficiency learners (e.g., Speaker 2) achieved better balance across CAF dimensions by efficiently self-monitoring, while others (e.g., Speaker 4) remained 'stuck' in fluency-focused output due to attentional limits (Skehan, 2015).

This finding is supported by Li et al., (2016b), who observed that immediate feedback led to improvements in explicit knowledge but did not always result in sustained growth in implicit knowledge, such as lexical depth. Similarly, in this study, learners with varying levels of proficiency and feedback adaptability showed different patterns of lexical growth. This is consistent with the work of Ahmadi and Ghaemi (2017), who found that learners with higher proficiency levels tended to benefit more from task repetition in terms of complex, accurate, and fluent speech, while lower proficiency required more extensive scaffolding to facilitate similar lexical development.

Moreover, the one-to-one virtual setting may have provided sufficient individualized support for some learners (Berry, 2019) but limited opportunities for interactive lexical negotiation that could have benefited others (Yilmaz, 2015).

Additionally, the role of feedback in facilitating lexical development appeared to be contingent upon contextual factors such as feedback timing and learner preferences. This aligns with Zhu & Wang, (2019) who emphasized that immediate feedback can enhance fluency and clarity. However, the time constraints of virtual classrooms may limit the extent to which learners can fully develop their lexical repertoire, particularly in spontaneous speaking tasks. In this study, feedback seemed to benefit some learners but had a more limited impact on others, underscoring the influence of contextual factors on lexical growth. This is supported by the findings of Arroyo & Yilmaz (2018), who argued that feedback effectiveness varies significantly depending on learners' ability to internalize feedback within time-limited contexts.

In conclusion, the findings reveal that the modified 4-3-2 technique fostered moderate gains in lexical diversity and referential clarity through task repetition and feedback—aligning with theories of cognitive load reduction (Sweller et al., 2022). However, the virtual environment's constraints—limited interaction time, high cognitive demands, and the task's decreasing time limit—curtailed deeper lexical development. Persistent reliance on familiar vocabulary and unnatural phrasing suggests attentional trade-offs (Skehan, 2015) and interlanguage fossilization (DeKeyser, 2020b), exacerbated by the absence of more task cycles and time constraints. Individual differences in proficiency and feedback adaptability further modulated outcomes, echoing the CAF framework's dynamic interplay (Bui & Skehan, 2018; Housen et al., 2012).

Implications

The results suggest several important implications for enhancing lexical complexity in virtual EFL instruction.

The study shows that the 4-3-2 technique helps learners expand their vocabulary range, although minimally. Teachers may incorporate such tasks while providing targeted and differentiated feedback on word choice, collocations, and phrasing. Since learners improved but still relied on repetitive vocabulary, feedback may explicitly highlight unnatural expressions and suggest alternatives.

The limited time in one-to-one virtual sessions restricted deeper lexical development (Al-Qahtani, 2020). To address this, teachers may supplement the task with asynchronous activities such as vocabulary logs to consolidate lexical development. Digital tools like vocabulary apps or corpus-based exercises could further reinforce lexical learning outside class.

While the decreasing time limit (4-3-2 structure) boosted fluency, it may have hindered lexical complexity (Tran & Saito, 2024). A re- modification—such as starting with untimed practice before introducing time pressure—could help learners focus on vocabulary first, then fluency. Pre-task lexical priming (e.g., word banks) could also reduce over-repetition.

Learners progressed at varying degrees, with higher-proficiency students benefiting more from feedback. Teachers may tailor corrections (e.g., implicit for advanced learners, explicit for beginners) and set personalized vocabulary goals. Encouraging self-monitoring (e.g., analyzing recordings or transcriptions for awkward phrasing) can also promote independent improvement, specifically in virtual classrooms (Loewen et al., 2022).

The findings align with theories suggesting that feedback helps learners notice gaps (Pannell et al., 2017) but that time pressure prioritizes other linguistic aspects over complexity (Skehan, 2015). Persistent errors indicate that lexical refinement requires sustained practice, so curricula may recycle vocabulary across multiple lessons to prevent fossilization.

The implications discussed above provide insights in relation to the findings on lexical complexity in this study. The next section presents the findings on the second category of speaking performance – syntactic complexity.

Findings on Syntactic Complexity

Syntactic complexity refers to the variety and elaboration of sentence structures used in speech (Housen et al., 2012; Housen, 2021; Kuiken, 2022). In the present investigation, syntactic complexity was analyzed through the progression

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from simple sentences with minimal elaboration to more complex sentences that incorporate dependent clauses or modifiers.

Additionally, the use of diverse sentence structures, ranging from simple to compound and complex sentences were assessed (see coding scheme on Appendix E).

Three key findings emerged: (1) Inconsistent and limited expansion of sentence structures, (2) persistent structural repetition with minor complexity changes, and (3) varied degrees of improvement across speakers.

Inconsistent and limited expansion of sentence structures

Across all five speakers, syntactic complexity showed slow and inconsistent improvements throughout the three repetitions of the 4-3-2 task. While some attempted subordination and sentence elaboration, their use of complex structures was often awkward or grammatically incorrect, limiting their overall syntactic complexity gains.

In the initial iteration, the majority of speakers used basic subject-verb-object (SVO) arrangements with little subordination or coordination. Speaker 1, for instance, primarily used basic sentence forms, with only occasional attempts at subordination, such as:

Speaker 1: “The reason is that because if you go to the riverside, the view is very huge.” (1st iteration)

While this sentence suggests an effort to increase complexity, redundancy and awkward phrasing limited its effectiveness.

By the second iteration, some participants expanded their sentence structures slightly, incorporating additional details. However, subordination remained limited, and structural repetition persisted. Speaker 2, for instance, produced longer but still repetitive sentences, frequently relying on conjunctions such as “and” and “so.”

By the second and third speeches, most speakers began expanding their sentences, incorporating additional clauses, modifiers, and connectors. Despite these adjustments, simple structures still dominated.

For instance, Speaker 2, by the final repetition, demonstrated an effort to introduce subordination: This marks an improvement from earlier iterations, where their speech contained simpler declarative statements with little elaboration.

Speaker 2: “If the distance is extremely close, I will choose a car because proximity will affect my travel frequency.” (3rd iteration)

Speaker 4 predominantly used simple declarative structures in the first iteration, with limited expansion and occasional structural inconsistencies:

Speaker 4:"I love to travelling with my best friend. We just found a location to visit, and then we just use our app like Little Red Book or Bilibili to find some visiting routine." (1st iteration)

With little subordination, these statements are simple and declarative. However, there are structural inaccuracies (to + – ing). Additionally, coordination is repetitive, limiting variety in sentence structure. By the second iteration, Speaker 4 attempted to expand ideas by adding more explicit reasoning but still relied on basic declarative forms:

Speaker 4: "I always travel with my best friend. I always make a detailed budgeting for our travelling money. We also spend more on the special food and the experience." (2nd iteration)

Here, repetition demonstrates an effort to establish habitual actions, but the structures remain largely isolated declarative sentences with limited complexity. There is some attempt at elaboration, but these additions do not significantly alter the simplicity of the overall structure. By the third iteration, Speaker 4 incorporated some past-tense narration and minor variations in structure, but still avoided subordination:

Speaker 4: "Like last year, we traveled in Harbin. We just cost a little in our hotels and flights. We always do our itinerary together." (3rd iteration)

While past-tense verbs ("traveled," "cost") indicate an attempt to recount past experiences, structural inconsistencies remain, such as incorrectly used verbs. Speaker 4’s sentence structures remained largely declarative across all iterations, with minimal use of subordination or complex embedding. Although slight refinements were observed, such as correcting verb tense and rephrasing details, the progression did not demonstrate a shift toward syntactically varied or embedded structures.

Additionally, while some expansion was observed amongst the speakers, grammatical inaccuracies often undermined complexity gains. Speaker 1’s attempt to expand ideas resulted in structurally flawed utterances, such as:

Speaker 1: “The most, largest river in Shanghai, name Huangpu, oh, called, give me a min– called Huangpu river.” (2nd iteration)

Persistent structural repetition with minor complexity changes

The frequent reuse of fixed sentence structures was a key observation. While some learners made modest attempts at expanding their sentences, many continued repeating similar structures across iterations, demonstrating minimal syntactic variation.

Speaker 3, for example, relied primarily on simple declarative sentences in the first iteration, with few variations. Initial efforts to introduce complexity often resulted in redundancy or unnatural phrasing, as seen in:

Speaker 3: “The travel travel frequency is um … is that one or two months, uh one time.” (1st iteration)

While this sentence incorporates subordination, hesitation and repetition weakened its effectiveness. By the third iteration, slight improvements were noted, particularly in the ability to form longer and more logically connected sentences. However, repetition of familiar patterns remained.

Speaker 3: “If the travel destination is far away, then I will go there by plan. However, if it's close, then I prefer to go there by the high uh high re- uh high speed train.” (3rd iteration)

Speaker 4 demonstrated the least syntactic development, relying on basic and repetitive structures across all three speeches. In the first iteration, their speech was highly straightforward, with minimal coordination or subordination. The second iteration saw only slight refinements in structuring ideas, and by the third iteration, there was no substantial

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increase in syntactic complexity. This suggests difficulty in expanding ideas beyond simple sentence patterns.

Speaker 4: "I love to travelling with my best friend." (1st iteration)

"I always er travelling with my best friend." (2nd iteration)

"I always… I always travel with my best friend." (3rd iteration)

Similarly, Speaker 5 displayed slight gains in clarity and connection between ideas but continued to rely on fixed expressions such as "so we," "this time," and "we always." Additionally, speaker 5 exhibited redundant phrasing and self-corrections, resulting to a flawed sentence as seen in their utterance:

Speaker 5: "We wanted to make some, make the- make some, make some different." (3rd iteration)

This reflects a struggle to formulate more complex structures under time pressure, resulting in circular phrasing rather than syntactic advancement. While minor refinements in sentence expansion were observed in the third iteration, the overall preference for repetitive structures limited syntactic growth.

Varied degrees of improvement across speakers

Although some learners demonstrated notable improvements in syntactic complexity, others maintained a relatively consistent level of structural simplicity throughout their speeches. Speaker 2 showed the most noticeable improvements, particularly in integrating subordinate clauses and refining sentence structures across repetitions. Speaker 1 and Speaker 3 demonstrated moderate progress, with some expansion of sentence structures but continued reliance on basic forms and occasional structural inconsistencies.

Speaker 4 displayed minimal syntactic progress, maintaining highly repetitive and straightforward sentence patterns across all three repetitions. Speaker 5 exhibited minor refinements in clarity and idea connection but continued to rely heavily on repetitive structures rather than varied syntactic patterns.

Discussion

This discussion answers the second in the secondary research questions.

The analysis revealed that learners exhibited slow and inconsistent improvements in syntactic complexity across the three repetitions of the speaking task. Grammatical inaccuracies and awkward phrasing often hindered some learners' attempts to construct complex sentences and expand their structures.

Despite numerous repetitions of the modified 4-3-2 approach, students found it difficult to consistently create more complicated structures, as shown by these results, indicating that it had a small effect on syntactic complexity (Thai & Boers, 2016; Tran & Saito, 2024). The stepwise reduction in speaking time (4 → 3 → 2 minutes) likely influenced participants to focus more on adjustments in other linguistic aspects rather than syntactic complexity growth (Skehan, 2015; Tran, 2019).

Additionally, the modified 4-3-2 technique included feedback between repetitions, which theoretically could have encouraged greater sentence restructuring.

However, the data suggests that learners focused more on other linguistic aspects rather than restructuring sentences. These findings align with Levelt's (1989) Speech Production Model, particularly the formulation stage, where learners encode linguistic structures (Bot & Bátyi, 2022). The limited expansion of sentence structures suggests that learners struggled with grammatical encoding, even after repeated practice (DeKeyser, 2018a, 2020b).

This is further explained by Swain's (1985) Output Hypothesis, which posits that producing language forces learners to notice gaps in their linguistic knowledge (Pannell et al., 2017). While learners attempted to produce more complex sentences, their errors indicate a need for targeted feedback to refine their output.

Additionally, Cognitive Load Theory (Sweller et al., 2022) provides insight into why learners might have struggled: the cognitive demands of formulating complex sentences while managing time constraints likely overwhelmed their working memory, limiting their ability to produce syntactically rich output (Tran, 2019).

This aligns with findings in Thai & Boers (2016) who found marginal improvements in complexity. Tran (2019) and Tran & Saito (2024) also emphasized that despite the integration of corrective feedback to the task, only minimal improvements in complexity were observed.

This finding also parallels research specifically on task repetition. (Zhu & Wang, 2019) found that while some improvements in sentence complexity occurred with corrective feedback, these improvements were often superficial and short-lived. The study's finding further emphasizes that task repetition alone is insufficient for significant vocabulary growth, and that feedback must be targeted and differentiated.

The frequent reuse of fixed sentence structures such as basic Subject-Verb-Object (SVO) constructions was one of the key trends observed among all speakers. These speakers only made minor attempts at subordination and coordination across the three speeches. This pattern confirms that repetition does aid fluency; however, it does not necessarily push speakers to restructure their sentences unless they receive explicit guidance on how they can possibly expand their sentences. This trend points out the modest impact of the modified4-3-2 technique on syntactic complexity (Tran, 2019; Tran & Saito, 2024). Specifically, the speakers tended to prioritize fluency and generating ideas over structuring complex sentences.

This trend reflects the Limited Attention Capacity hypothesis; learners may struggle to balance their focus between fluency, accuracy, and complexity (Skehan, 2015). In the early iterations, learners prioritized fluency and idea generation. This led to the observed repetitive sentence structures. Only in later iterations did the speakers began to allocate attention to complexity, albeit with limited success. Skill Acquisition Theory (DeKeyser, 2018a, 2020b) explains this pattern. That said, while repeated practice can lead to automaticity, the speakers in this study may not have reached a stage where they could consistently produce complex structures without significant cognitive effort.

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When the speakers attempted to construct more complex sentences, they often had awkward phrasing, redundancy, or hesitations. This indicates uncertainty and a lack of automaticity, which aligns with Al-Shareef (2016). This means that when learners attempt to produce more complex sentences under pressure, they often struggle with other linguistic aspects, and thus, leading to non-fluent or hesitative speech. Surprisingly, it is difficult to sustain such complexity without extensive practice and feedback.

According to authors Cao (2018) and Kuiken (2022) that syntactic complexity develops more slowly and requires targeted instructional support. Thad said, the findings of the present study reinforce this notion. Speakers demonstrated only moderate increases in clause integration and subordination. While some speakers experimented in sentence structures by the final iteration, most continued to rely on simple Subject-Verb-Object patterns with occasional attempts in expanding sentences with basic coordination ("and," "so"). Attempts at embedding clauses were also rare.

This indicates that time constraints may have limited the speakers to expand. This supports studies on the 4-3-2 technique (Cao, 2018; Thai & Boers, 2016), stating that while task repetition can contribute to CAF development, the degree of syntactic complexity growth may be limited under time constraints.

Speakers' lexical choices were limited because of the mental demands of spontaneous speeches and limited interaction time in virtual classrooms. The present study observed that speakers put more attention to delivering their speeches fluently and coherently over expanding sentence structures when the iterations decreased from four minutes to two minutes. Generally, this implies that task repetition with time pressure results in speakers' simplified sentences since they attempt to maintain fluent delivery over others, as supported by Thai & Boers (2016).

The findings also highlight individual differences in syntactic development. The speakers showed variability in syntactic development. This indicates that the impact of the modified 4-3-2 technique on syntactic complexity is influenced by speakers' self-reported proficiency levels and their cognitive processing abilities. That said, some learners were able to incorporate more complex structures across iterations, while others maintained simpler constructions. The latter may have potentially put more attention on fluency overelaborating sentences. This suggests that higher-proficiency learners (e.g., Speaker 2) may have had more linguistic resources to draw upon, that is why they experimented with complex structures. In contrast, lower-proficiency learners (e.g., Speaker 4) may have been constrained by their limited knowledge or mastery in grammatical rules. This variability in outcomes directly addresses the present study's research question. In short, the modified 4-3-2 technique does not uniformly promote changes in syntactic complexity across all learners. The Limited Attention Capacity Hypothesis (Skehan, 2015) provides further insight. While some learners were able to balance complexity with fluency and accuracy (Cao, 2018), others prioritized fluency at the expense of syntactic elaboration.

The individual differences in feedback adaptability and language proficiency of speakers also shaped how they developed complexity in sentence structures. In the present study, the participants who showed modest clause integration (e.g. Speakers 2) had a higher initial proficiency. This possibly allowed them to incorporate complex structures more readily. In contrast, less proficient learners (Speakers 1 and 4) struggled with constructing complex statements, even showing persistent errors in structure. Apart from individual learners' proficiency levels, the differences in syntactic complexity development also correlate with feedback adaptability, as seen in the patterns of grammatical accuracy.

To sum up, the modified 4-3-2 technique has led to minor changes in constructing statements. However, it did not consistently promote complex restructuring of sentences. Building on these, the next section presents several key implications.

Implications

The results demonstrate that virtual learners often defaulted to familiar sentence structures due to time and cognitive constraints. This suggests the need for additional scaffolding measures, such as structured planning phases before task repetitions and guided reformulation exercises. Teachers may explicitly prompt students to vary their sentence structures between repetitions, as learners may not naturally attempt more complex syntax without encouragement.

Explicit support is also necessary in reconstructing simple sentences into complex statements. Since speakers in the study tended to rely on simple syntactic patterns, teachers may add targeted interventions. These may include sentence-combining exercises and providing model sentences before subsequent iterations. These strategies align with research showing that task repetition alone is insufficient. In relation to feedback. It may be specifically designed to encourage learners to expand their sentence structures by giving chances for correction rather than focusing solely on errors and corrections. Effective feedback may possibly include prompts that encourage subordination or relative clause use, along with chances for speakers to analyze and revise their own syntactic patterns, through transcript review for instance.

Another important consideration is the individual differences in syntactic development. The variability across participants means that differentiated instruction is necessary. For instance, basic learners may possibly need modeling of complex structures; intermediate learners may potentially benefit from focused practice on specific constructions; and advanced learners may be ready for self-reflection tasks. This tiered approach acknowledges that development in sentence complexity occurs at different rates and requires tailored support.

Finally, the findings greatly emphasize that developing syntactic complexity is a long-term process. It generally extends beyond brief task repetition, like the modified 4-3-2 technique. Complexity-building activities that may sustain engagement may be embedded throughout the curriculum. This might include several approaches including extended speaking opportunities with explicit complexity goals, systematic recycling of target structures across lessons, and a

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balanced focus on other linguistic aspects alongside syntactic development. The modified 4-3-2 technique can be effective when integrated into this broader instructional framework, but may not be viewed as a standalone solution for developing syntactic complexity.

The next section presents the findings on the third category of speaking performance – accuracy.

Findings on Accuracy

Within the CAF triad, accuracy refers to how correct language use is. In the context of second and foreign language learning, accuracy refers to the ability to produce language that is free from errors and follows the grammatical and lexical rules of the target language (Housen et al., 2012; Housen, 2021).

In the present study, accuracy was analyzed in terms of grammatical deviations, and self-correction patterns (see coding scheme on Appendix E).

The analysis revealed key patterns. First, grammatical errors were persistent across all three iterations. Second, self-correction and repair were minimal. Finally, there is an observed limited improvement in grammatical accuracy.

Persistent grammatical errors

A key observation across all participants was the recurrence of specific grammatical errors that persisted throughout the three repetitions. These errors were particularly evident in verb tense use, article application, subject-verb agreement, and word order. Despite multiple opportunities for refinement, most learners did not exhibit noticeable improvements in these areas.

a. Verb tense errors

The first aspect where Speakers showed difficulty is in using tenses consistently. They often shifted between forms, e.g. present and past tense usage, inappropriately. Speaker 1, for instance, made multiple verb tense errors from their first attempt to the third.

Speaker 1: "I live in Shanghai for so many years. um That named Huangpu river and now I rent a new apartment one month ago." (1st iteration)

"I live in Shanghai for so many years. um last month, I rent a new apartment. (2nd iteration)

"last month, I move to the- I moved to the new apartment." (3rd iteration)

These errors remained in the second iteration even after corrective feedback was given. In the third iteration, Speaker showed slight changes but still hesitated and self-corrected.

While Speaker 1 eventually corrected the tense, the repetition and hesitation until their third attempt show ongoing difficulty. Similarly, Speaker 5 frequently switched between present and past tense forms, as in "We choose Thailand" instead of "We chose Thailand."

b. Article and preposition misuse

The second type where Speakers had errors was the improper use or omission of definite and indefinite articles, as well as prepositions. Speaker 3, for example, stated, "the Thailand," adding an article before the country's name. Similarly, Speaker 5 incorrectly constructed, "at that evening," instead of "in that evening." Speaker 4 frequently omitted articles, saying "... to book tickets" instead of "... to book the tickets." These patterns show that these speakers continue to struggle in using articles and prepositions in speaking.

c. Subject-verb agreement challenges

The third aspect was subject-verb agreement errors. Several instances such as Speaker 4's utterance, "it give us," instead of the correct form, "it gives us." Speaker 5, "We lives in different cities…" instead of "We live in different cities" and Speaker 2, "the short trips is once, once one month" instead of "the short trips are once one month". These errors persisted across all three iterations. This observation shows that learners were not consciously monitoring their speech for subject-verb agreement violations. This possibly indicates a lack of automatized grammatical structures in spoken production.

Minimal Self-Correction and Repair

Self-correction was observed among all participants; however, how often they self-corrected and whether it was effective varied. Some corrections were incomplete and even led to further confusion, while others successfully made their speeches clear and accurate. Speaker 1, for instance, initially said, "I move to the new apartment last month," and later corrected it to "I moved to the new apartment last month." However, this was one of the few instances of self-correction because other tense errors persisted throughout their speeches. Speaker 2 showed occasional self-correction, as seen in their attempt to correct, "Oh, sorry, department," after initially using the term, "apartment." Speaker 3 often attempted self-corrections but left them incomplete. Similarly, Speaker 4 focused mostly on word choice, though these attempts were largely unsuccessful, as seen in, "do some excited - exciting… er, exciting items." Also, Speaker 4 consistently misused subject-verb agreement, repeating "She always need to track locations," across all three iterations, without applying the corrective feedback given. Lastly, Speaker 5 frequently corrected verb tense and phrasing, as illustrated by their statement, "shall we went to—shall we go to Thailand?" That said, self-correction varied across speakers. Most speakers had minimal self-correction in early iterations, while self-awareness somehow increased in later attempts.

Limited improvement in accuracy across repetitions

Despite repetition and feedback, changes in accuracy were deemed minimal. Speaker 2 minimized their errors over time; some corrections in article use and subject-verb agreement in the second and third iterations. Although these changes indicate small shifts towards greater grammatical accuracy, they were inconsistent and not sustained across all iterations.

Discussion

This discussion answers the third secondary research question.

The persistence of verb tense errors, article/preposition misuse, and subject-verb agreement violations across all iterations underscores the cognitive trade-offs learners face in fluency-oriented tasks (Skehan, 2015). The speakers prioritized delivering their message to their listener over using precise grammatical structures possibly due to the time pressure of the modified 4-3-2 technique. This led to speakers still exhibiting errors across three attempts even though corrective feedback was given.

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Levelt's Speech Production Model explains these patterns. That said, formulating and articulating ideas in real time competes for the same cognitive resources needed for monitoring and repair. For example, the observed shifting of Speaker 1's tenses show that the speaker had to direct their attention to both retrieving lexical items and applying tense rules. Nevertheless, the observed partial correction in the third attempt shows that the speaker was able to monitor their speech. However, the decreasing time frame of the technique limited consistent changes in accuracy. Also, Speaker 5's fossilized error persisted possibly because they were unable to access the procedural knowledge of irregular past forms under task pressure (Y. Suzuki, 2024b).

Moreover, the article and preposition errors and subject-verb agreement that recurred in all attempts reveal deeper issues. Speakers may have had difficulty remembering and applying rules article usage, such as zero article for countries or third person (-s), or these might have been overridden by L1 structures (DeKeyser, 2020b; Y. Suzuki, 2024b). This suggests that the speakers may have encountered knowledge gaps in the declarative stage (Hariri Asl, 2023). That said, even when learners knew the rules, they couldn't automatically apply them during iterations (Y. Suzuki, 2024b). This signifies a failed proceduralization. This is further explained by Skehan's (2015) Limited Attention Capacity Hypothesis. This hypothesis states that fluency tasks drain attentional resources which leaves little room for speakers to pay attention to grammar during delivery. This supports prior research suggesting that time-limited task repetition often led to increased fluency at the expense of accuracy. This means that as learners focus on maintaining speech flow, they sacrifice monitoring errors (Thai & Boers, 2016).

The few instances of self-corrections observed signals monitoring efforts brought by task repetition and impact of corrective feedback in between iterations. However, the varying degrees of self-correction among participants indicate that different speakers had different levels of metalinguistic awareness during speaking. According to Schmidt's Noticing Hypothesis, a conscious error must be identified before it may be corrected (Zhang, 2022). However, these were often abandoned or incomplete due to time pressure and attention being directed to various CAF components, despite the feedback given before the second and final iteration.

All speakers engaged in some form of self-correction; however, these attempts were inconsistent. Speakers with higher proficiency had shown more effective self-correction. This instance suggests that these speakers have a stronger grasp of grammatical accuracy, particularly in verb tense and phrasing. This also reflects an intermediate stage in monitoring accuracy (Bot & Bátyi, 2022). This is the phase where corrections occur but are less frequent or systematic. Also, these speakers may be further along in proceduralizing their grammatical knowledge (Y. Suzuki, 2024b).

On the other hand, speakers with incomplete or unsuccessful corrections were mainly from speakers with lower proficiency. This instance implies that these learners struggle to reformulate their speech effectively in real time (Bot & Bátyi, 2022). This also suggests that while most learners recognize errors in their speech, their ability to repair them successfully is not always fully developed. That said, they may still rely on conscious rule retrieval, which can disrupt other linguistic aspects (Y. Suzuki, 2024b).

This also indicates that the modified 4-3-2 task's design pushed learners to prioritize delivery to meet time limits. As per Skehan (2015), attention is finite; learners allocated resources to lexical retrieval at the expense of other linguistic aspects. This suggests that they were unable to successfully monitor them in real time due to mental demands and time limitations.

The findings indicate that the task repetition and feedback result in self-monitoring to some extent, echoing Yufrizal (2018) findings. However, the technique proves insufficient for generating remarkable changes in speakers' grammatical accuracy, similar to prior studies who found that the technique led to minimal improvements in accuracy during the task (Galindo Ochoa, 2017; Thai & Boers, 2016; Tran, 2019; Tran & Saito, 2024; Yen, 2019). Considering corrective feedback as a key addition to the technique, the findings of the study echoed Muntasir et al. (2022) who also reported similar results; improvements were minimal after feedback.

The observed self-correction attempts didn't necessarily translate to minimized errors across iterations. These inconsistencies in effective self-corrections indicate that task repetition alone may not guarantee changes in accuracy. That said, unless it is combined with additional scaffolding apart from corrective feedback, it may likely show significant results. These are also reflected in studies on task-based learning (Alejandra & Ramirez- Lozada, 2023) and task repetition (Muntasir et al., 2022; Santos & Ramírez-Ávila, 2022).

Thus, this study emphasizes that integrating grammar-focused feedback into fluency-based tasks has potential to achieve a more balanced change in both fluency and accuracy. This supports Arab (2016) who noted that some speakers focused on meaning within the decreasing time frames and failed to preserve accuracy.

The differences in proficiency levels may also have influenced the speakers' speaking performances. Similar to the findings of Bozorgian and Kanani (2017) with intermediate Iranian EFL learners, minimal improvements were observed. Against Bao (2022), who found that accuracy only improved for lower-proficiency students, the observed minimal changes reflect that both higher- and lower- proficiency speakers struggle with using accurate grammar rules.

To summarize, the modified 4-3-2 technique does not appear to be a remarkable catalyst in improving accurate grammar use among virtual EFL leaners. As observed from the shifts and patterns in the speakers' grammar usage in three iterations, they continued to struggle with errors even after corrective feedback and multiple attempts. The results indicate that additional scaffolding apart from corrective feedback is necessary to complement the fluency-driven nature of this technique.

The implications in the next section are potentially useful for improving accurate grammar use in virtual EFL instruction.

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Implications

First, the study highlights the need for more targeted feedback to address persistent grammatical errors and fossilizations. The findings show that the modified 4-3-2 technique led to limited changes in correct usage of grammar rules. This implies that general feedback was insufficient.

Thus, to enhance this aspect, language teachers may provide explicit, form-focused corrections, such as metalinguistic explanations, recasts, and error highlighting. Specific feedback may direct learners' attention to recurring mistakes—rather than only content—can help them apply corrections in subsequent attempts.

The results emphasize the importance of encouraging self-monitoring and self-correction strategies. Many learners failed to notice or correct their errors in real time. This indicates weak metalinguistic awareness.

To address this, language teachers may add guided reflection activities and error-noticing tasks after the speaking task. When learners are given opportunities for to transform noticed input into productive intake, such as transcript analysis and peer feedback, they may identify and correct their mistakes; possibly avoiding fossilization. Plus, self-verbalization exercises may reinforce grammatical accuracy as learners practice and understand why errors existed. Zhang (2022) noted that noticing is important in developing language use; however, whether it is effective depends on learners' ability to consciously recognize gaps in their interlanguage and systematically address them through targeted practice.

Another key implication is how speakers can manage cognitive load during speaking tasks. When speakers attempted to maintain fluency, or other linguistic aspects, it often led to prioritizing meaning delivery instead of accurate use of grammar, which resulted to errors in all three attempts.

To mitigate this, language teachers may add strategic pauses for self-monitoring. For example, pre-task grammar priming, where speakers review key structures beforehand, and reference tools, such as grammar checklists, may reduce the strain in mental processes. With this, learners may allocate more attention to precise grammar use.

Finally, as discussed, the speakers likely remained in the declarative knowledge stage and struggled to apply rules automatically (Hariri Asl, 2023). This implies that speakers may need more deliberate practice in order to proceduralize grammar.

To deal with this, teachers may combine teaching explicit grammar with controlled practice, such as drills, before moving to spontaneous speech. This may encourage learners to move forward from consciously applying rules in grammar to using them automatically in real-time (Moeen et al., 2019).

In summary, these pedagogical adjustments may help learners internalize accurate grammar use more effectively. These may potentially lead to more grammatically accurate spontaneous speech without the need to sacrifice other aspects of speaking performance.

The next section presents the findings of fourth category of speaking performance—fluency.

Findings on Fluency

Fluency, in the CAF triad, refers to the smoothness, continuity, and znatural flow of speech. It encompasses several dimensions, such as the continuity of speech, hesitation, pausing, and the use of filler words (Housen et al., 2012; Housen, 2021). These features reflect a learner's ability to produce fluid speech and with minimal interruptions.

Fuency was analyzed in terms of shifts in speech continuity, hesitations and pausing, and filler word usage (see coding scheme on Appendix E).

The analysis revealed several key patterns. First, pronounced hesitations, pauses, and fillers in early speeches were observed. Second, there is a gradual reduction in hesitations and fillers over time. Third, there is an increased speech continuity and faster delivery over time. Finally, variability in fluency gains across speakers was observed.

Pronounced hesitations, pauses, and fillers in early speeches

All five speakers displayed disjointed and fragmented speech delivery in their first attempt. The speakers had hesitations, prolonged pauses, and heavy reliance on fillers. These were found as false starts, mid-sentence breaks, and difficulty retrieving vocabulary. Hesitations, in particular, were common at the beginning of sentences and before complex ideas which affected in speech continuity.

Speaker 1 exhibited multiple interruptions while concluding their topic:

Speaker 1: "And there is also, um let me think. In the future, I wi– I will do this..." (1st iteration)

Similarly, Speaker 2 struggled with formulating ideas smoothly. The hesitation markers throughout their descriptions of the topic portray this. Self-corrections mid-sentence also caused disruptions:

Speaker 2:"It talked about the birth of NeZha, which is the main character of this– in this movie. He is… uh he is uh, should I say he's a monster?" (1st iteration) "eh And I watched it last Saturday er or last Sunday, I think last Saturday…"(1st iteration)

In addition, pauses before keywords and phrases were also disruptive, as demonstrated by Speaker 3.

Speaker 3: "um … uh … uh … uh … my opinion is uh something need to save and something need to spend." (1st iteration)

The first iterations of all speakers were also marked by high filler-word dependence. Fillers such as "um," "uh," and "er" were frequently used to fill gaps in speech as speakers searched for words or structured their ideas. These fillers appeared before complex words, in mid-sentence pauses, and at phrase boundaries. They disrupted the continuity of their speeches.

Speaker 3 used excessive fillers in their first iteration, making the speech less fluid and structured:

Speaker 3: "uh … uh … uh … cost effect– cost effective uh … uh travel method. (1st iteration)

Similarly, Speaker 4 displayed overuse of fillers when describing travel experiences:

Speaker 4: "And for my friend, er she always er she always er she always rank this locations in Google Map." (1st iteration)

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Some speakers demonstrated unnecessary stalling by frequently repeating most words in the iterations as seen in Speaker 5's third iteration:

Speaker 5: "But we we but we are, but we are very close friends, because we always talk with each other through WeChat." (1st iteration)

Improved fluency and continuity in later iterations

As task repetitions progressed, hesitations and fillers were less observed across all speakers. The speakers had fewer pauses, showing that they retrieved words more quickly, and relied less on fillers to maintain smooth delivery in the second and third attempts.

For example, Speaker 2 had multiple hesitations and false starts in the first iteration; however, they were able to deliver a more continuous and structured speech by the third iteration:

Speaker 2: "which is the main character of this– in this movie. He is… uh he is uh, should I say he's a monster?" (1st iteration)

"Basically, it's a movie adapted from a Chinese myth. It talks about the main character, NeZha's growth." (3rd iteration)

Speaker 5, who initially had multiple false starts, was able to deliver speech with fewer disruptions in their final iteration:

Speaker 5: "After countdown, we watched the beautiful fireworks together." (3rd iteration)

In later iterations, speakers depended less on fillers. Speaker 1, for instance, delivered their speech smoothly in the final iteration after initially having multiple fillers in their first attempt:

Speaker 1: "… I moved to the new apartment. It's very near to the riverside. It's just 2 km far away from the river side. So, it's very convenient to take a walk along there." (3rd iteration)

Most speakers demonstrated smoother sentence delivery with fewer mid-sentence disruptions while initial fillers were replaced by silent pauses and self-repairs. The speakers also had less unnecessary stalling through iterations.

Notably, most speakers were able to control their pacing and speech continuity in the third iteration. The observed previous reliance on pauses and fillers were less noticeable. This ultimately allowed for faster and smoother speech delivery.

Speaker 4 had multiple breakdowns in their sentences in the first iteration. Then in the third attempt, they were able to deliver more fluid sentences.

Speaker 4:"And my friends will er my friend would focus on bo– focus on book tickets." (1st iteration)

"We always do our itinerary together." (3rd iteration)

However, it is important to note that hesitation markers, pauses, and fillers didn't fully disappear. These were still observed in most sections of their speeches, especially in instances where they self-correct or retrieve words.

Speaker 2: "… from other sectors and uh other uh apartment.

Oh, sorry, department." (3rd iteration)

Speaker 3: "As for uh frequency, I uh generally, I will go to– I will have a long trips twice a year uh". (3rd iteration)

Speaker 5: "This time, I traveled with three– with my three friends and their husbands" (3rd iteration)

Variability in fluency gains across speakers

Although all speakers showed changes in their fluency, some showed remarkable progress compared to others. Some speakers had less hesitations and fillers, while others still showed minor fluency issues in their third attempt.

The speaker who showed the most remarkable changes in fluency development was speaker 2. This speaker transitioned from hesitant, filler-filled speech to a near-continuous delivery by the third iteration. In contrast, speakers, such as Speaker 3, had awkward pauses and minor hesitation markers until their third attempt in delivering a speech.

Speaker 3: "I choose high-speed railway uh because it's comfortable uh and convenient."

Fluency gains prioritized over accuracy and complexity

Significant advancements in fluency were not accompanied by notable increases in precision and complexity. Most speakers paid more attention to delivering their speech smoothly, even if it meant having errors in grammar usage or sticking to simple sentence structures. For example, in Speaker 1's third iteration, the delivery was fluent but grammatical errors remained:

Speaker 1: "It's just 2 km far away from river side." (Article omission)

Similarly, in the third iteration of speaker 5, they produced a fluent but grammatically incorrect sentence:

Speaker 5: "We spend 300 yuan to visited the Ice and Snow Wonderland." (Incorrect verb form)

In summary, the findings reveal that the modified 4-3-2 technique, which incorporates corrective feedback between iterations, contributed to remarkable improvements in fluency. Across iterations, speakers demonstrated minimized hesitation markers and filler words, improved speech continuity, and faster speech delivery. All of these confirm the effectiveness of the technique in enhancing fluency.

Discussion

This discussion answers the fourth in the secondary research questions.

The updated 4-3-2 method, according to the results, produced significant improvements in fluency development. This is observed in the minimized hesitations, pauses, and filler words across the task. The observed pattern of changes indicates that speakers had challenges in retrieving words from memory and planning sentence as they spontaneously delivered their speeches. Nonetheless, the speakers were able to deliver their final speeches more continuously and smoothly than the initial ones. These findings support the idea that task repetition, as in three iterations, helps learners develop more automatic speech production (Cao, 2018; Sari, 2023). It also aligns with Tavakoli & Wright (2020) who stated that fluency is not solely dependent on linguistic knowledge, and that speaker's ability to access and produce language efficiently in real time also play a great role.

One of the most striking changes in fluency was the gradual reduction of hesitations and fillers over time. This shift means that when speakers practice and are exposed to the same content, as in the same speech topic, they are likely to

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focus more on delivery rather than focusing their attention to searching for words or structuring their thoughts (Arredondo-Tapia & Garcia-Ponce, 2021; Kim et al., 2018b; Muntasir et al., 2022). Also, most speakers began replacing their initial filler words and filled pauses with silent pauses or self-repairs. This change implies that these speakers have gained more control over their speech production. Accordingly, these speakers initially relied on controlled processing but as they repeated their speeches, they shifted toward automatic processing (DeKeyser, 2018a; Y. Suzuki, 2024b).

The findings also show that fluency improvements were not uniform among the speakers. This can be attributed to individual differences, such as cognitive processing speed, prior speaking experience, or comfort with the task (Róg & Krawiec, 2024; Sweller et al., 2022; Tran, 2019).

Specifically, some speakers delivered a near-continuous speech by the third attempt, while others still showed minor hesitation markers and awkward pauses. This echoes Tavakoli (2019) who states that automaticity develops at different rates depending on the speaker's proficiency and exposure to speaking practice.

The minimized hesitation markers are a direct indicator of improvement in fluency. Accordingly, hesitation often reflects the mental demands needed in formulating speech in real-time. Referring to Skehan (2015), this phenomenon is particularly common in foreign language contexts where speakers often attempt to balance accuracy and complexity with speech fluidity. This finding align with Bozorgian & Kanani (2017); task repetition allows speakers to focus on delivering meaning instead of putting their attention to individual word selection, reducing cognitive strain and pauses over time. It also supports Bygate (2018) and Dawadi (2019); learners retrieve language more efficiently, minimizing disruptions in speech.

Despite the observed changes, hesitations were not entirely eliminated. This mainly indicates that some cognitive effort remained. Cognitive Load Theory (Sweller et al., 2022) may explain the differences in processing capacity. That said, some speakers continued to rely on fillers despite increased repetition and feedback. This aligns with Tavakoli & Hunter (2018); even proficient speakers use may pause strategically in order to manage speech flow. It also supports the argument that fluency is not defined by the complete elimination of pauses but rather by their strategic and less disruptive use, and that hesitation markers are inherent in spontaneous speech, as emphasized by Y. Wang (2021).

Based on Levelt's Speech Production Model (Bot & Bátyi, 2022), the dysfluencies which remained until the final attempt may reflect difficulties in conceptualizing and generating ideas for speech delivery. This occurs when speakers attempt to articulate more complex ideas, especially after corrective feedback. This is consistent with (Arroyo & Yilmaz, 2018); fluency gains in synchronous computer-mediated communication (SCMC) contexts were not homogeneous, with some learners benefiting more from immediate feedback than others.

The observed decline in dependence in filler words across repetitions reflects a remarkable change in retrieving vocabulary and real-time speech planning. In the initial iterations, excessive fillers affected how fluidly the speakers delivered their speech; however, as they progressed through the task, they showed a more naturalized use. This aligns with Firiady and Mahendra (2019), who support the idea that frequent speaking practice leads to decreased filler use as learners develop greater control over speech planning. These fillers became less intrusive and more purposeful, echoing Tavakoli & Hunter (2018), who said that fillers could serve as a compensation strategy in foreign-language speech.

It also aligns with Bangalao (2025); the progressive time reduction in the 4-3-2 technique forces learners to produce speech more efficiently, leading to fewer hesitation markers and fillers and a more structured output. In short, this implies a developmental shift toward naturalized speech production: that filler reduction is not the sole indicator of fluency; instead, how fillers are used within speech production is equally significant (Syamsudin et al., 2024).

By contrast, some speakers continued to rely on fillers, particularly when retrieving complex words and phrases or reformulating constructions based on corrective feedback. The Cognitive Load Theory (Sweller et al., 2022) may explain this shift. When speakers formulate speeches under time constraints, they may occasionally rely on fillers since they require additional cognitive effort.

Task repetition facilitated fluency improvement. With three iterations on the same topic, the speakers were able to familiarize the content of their speeches. This helped reduce cognitive load during task and resulted in more cohesive and automatic speech delivery, especially in the third attempt. However, this negates Galindo Ochoa (2017); task repetition did not lead to significant improvements in fluency.

Nonetheless, this proves that task repetition provides learners with opportunities to refine their speech through successive iterations; this echoes with prior studies (Bao, 2022; Dawadi, 2019; Fang, 2021; Santos & Ramírez-Ávila, 2022; Yufrizal, 2018). In addition, the time pressure in the modified 4-3-2 technique pushed learners to quickly retrieve words from memory and deliver their speeches fluently (Arab, 2016; Bangalao, 2025; Ghasemi & Mozaheb, 2021; Vaca & Vanessa, 2019). By contrast, hesitations didn't fully disappear across even until the third or final iteration, especially because speakers were asked to speak and deliver their speech within the decreasing time limits (Cao, 2018; Santos & Ramírez-Ávila, 2022; Yufrizal, 2018).

The finding can also be associated with individual topics of choice. The speakers were given the freedom to choose their topics. This lessened the cognitive load during speaking (Ahmadian et al., 2015; Le, 2024; Nguyen, 2024); familiarity and interest in topic content may have contributed to lesser mental processes since speakers may have chosen topics related to their daily life. More diverse and less demanding topics were presented to the speakers to choose; this allows them to to perform well in speaking, as suggested by Muntasir et al. (2022).

It was revealed that speakers had variability in fluency improvement. This indicates that fluency improvement is not uniform and may depend on certain factors, including familiarity with the task, confidence in language use, and the

ability to incorporate feedback effectively. The findings imply that some speakers adapted to the technique faster than others. This supports Duong et al. (2023), who found that working memory capacity and prior lexical knowledge influence the extent to which learners improve fluency during task repetition.

Furthermore, the mentioned factors may have affected how speakers depended on fillers. For instance, Speakers 2 and 4 minimized fillers in later iterations, indicating that these speakers may have gained confidence and linguistic flexibility that allowed them to use fillers more effectively as planning devices rather than crutches. This is in line with the findings of Syamsudin et al. (2024) findings wherein learners used filler to address speaking challenges during the conversation due to their linguistic components' shortage – limited mastery of vocabularies and limited understanding of grammar.

By contrast, Speakers 1 and 5, who continued to rely on fillers, show that they may have faced processing difficulties, such as slow lexical retrieval.

One possible explanation is self-reported proficiency levels—more proficient speakers may have been better equipped to use task repetition. In contrast, lower-proficiency learners might have struggled with cognitive overload. That said, speakers who could process the feedback and adjust their words and sentence patterns accordingly showed more remarkable changes in their fluency.

This implies that high-proficient speakers showed greater fluency but had to adjust their speech rate and content to fit the decreasing time frames, aligning with Liu (2018).

Conversely, the speakers who struggled with fluency may have faced additional challenges, including the inability to integrating feedback within a limited timeframe. This signifies that low-proficient learners tend to hesitate and thus, abandon messages, also aligning with Liu (2018). It also provides evidence that even proficient learners must strategically manage their output when speaking under time pressure (Liu, 2018).

In relation to virtual classrooms, the study suggests this setting may have affected changes in fluency to a certain extent. That said, virtual instruction provides chances for learners to practice their speaking skills.

However, due to the limited class time, as in 25 minutes, some speakers may have struggled with real-time processing, aligning with Alshumaimeri & Alhumud (2021). Reduced real-time interaction and spontaneous speaking opportunities in virtual classrooms may limit fluency gains. In addition, some learners still exhibited occasional hesitation markers, which may be linked to challenges unique to online learning settings. On a similar note, the present study emphasizes that the lack of physical co-presence in online learning. This may have affected learners' confidence, leading to increased hesitation and reliance on fillers in the early stages of the speaking task.

Despite these challenges, the study reinforces the value of task repetition and feedback in boosting fluency in virtual classrooms. Accordingly, task-based speaking activities can be implemented in virtual classrooms, as proven by the improvement in fluency among the speakers in this study. This aligns with (Dooly & Vinagre, 2022): technology-enhanced instruction can support oral fluency development.

To sum up, these findings underscore the importance of considering individual learner trajectories when implementing the modified 4-3-2 technique. Repetition and feedback do lead to changes in fluency, their effectiveness varies depending on learners' ability to process and act on corrective input.

The modified 4-3-2 technique shows promise in supporting fluency development, particularly in reducing hesitation and improving speech continuity. However, the degree of improvement varies depending on learner characteristics and contextual factors, such as the virtual learning environment. The findings emphasize that fluency gains may not be universal and are influenced by factors like learner adaptability to feedback, proficiency levels, and the constraints of the learning context.

Several key implications are discussed below.

Implications

First, the findings have shown that some speakers had remarkable changes in fluency while others retained similar disfluencies until their third attempt. This means that extended practice cycles may be necessary for lasting impact.

Instructors may add multi-session fluency drills with tasks that progresses in complexity. This may push learners to automatically produce language through practice. Nonetheless, the fluency-accuracy trade-off warrants a more balanced approach. In this situation, teachers may alternate fluency-focused tasks with accuracy-oriented follow-ups.

Cognitive load management emerged as another critical factor. To manage mental demands, speakers may benefit from pre-task planning. Introducing a task before the actual speaking task, including idea organization and key vocabulary rehearsal, may help learners manage the demands.

Teachers may teach techniques like sentence starters and discourse markers which can further reduce formulation strain. In consideration to individual differences in improvement in fluency, differentiated support may be need: low-proficiency learners may do shadowing exercises or additional repetitions, while advanced learners can refine fluency through self-monitoring of recorded speech.

Feedback delivery may also to be optimized more. Targeted feedback on hesitation patterns, such as filler-word overuse, and asynchronous practice tasks can deal with the unique challenges of virtual settings.

Finally, the study underscores that fluency development is context-dependent. While task repetition builds proceduralized speech, transfer to spontaneous conversation requires varied topic exposure and real-world interaction opportunities. Future research may investigate long-term retention of fluency gains and the role of cognitive factors, such as working memory, in individual progress.

In summary, extended practice cycles, pre-task planning, differentiated feedback, and digital learning optimizations may maximize the technique while ensuring that learners develop more natural, confident, and spontaneous speech abilities over time.

Synthesis of Overall Findings

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This discussion is a synthesis of the study's key findings on all four aspects of speaking performance which are individually presented and discussed above. This answers the primary research question. The evidence suggests that the modified 4-3-2 technique plays a significant role in enhancing speaking performance in virtual EFL classrooms. The following key patterns emerged.

Fluency development: the most responsive dimension

The findings revealed that fluency is the aspect of speaking performance most positively impacted. This was observable in speakers' speeches which had smoother speech flow, minimized pauses and reliance on fillers in their final attempts during the speaking task.

This is in line with the concept that task repetition does help proceduralize language use, shifting from controlled to automatic processing (Y. Suzuki, 2023a, 2024b). The findings also support the argument that task repetition reduces cognitive load, freeing learners to focus on certain linguistic aspects (Sweller et al., 2022).

Consistent with prior studies, this research confirms that multiple iterations of timed speaking tasks enhance fluency (Arab, 2016; Yufrizal, 2018). On a similar note, it also confirms Vaca & Vanessa (2019). Timed monologue recordings not only improved fluency but also boosted learners' confidence. With corrective feedback added to the original technique, speakers showed more changes in their fluency. This agrees with Santos & Ramírez-Ávila (2022) who shared similar results.

Moreover, it was found that speakers did not have a similar change in fluency development. This shows that individual factors potentially affected fluency differently. These include speakers' proficiency level and how they adapted to corrective feedback, as noted by Tran & Saito (2024).

The virtual classroom's one-to-one or dyadic format also enabled speakers to refine their language in order to fit the time limitations imposed by the technique, echoing Arroyo & Yilmaz's (2018): immediate feedback is effective in synchronous online environments.

Limited gains in lexical and syntactic complexity

Some speakers introduced more new vocabularies and phrases by the third iteration. This shows a change; however, this was inconsistent among speakers. Many speakers continued using familiar lexical sets and even used unnatural word choices, such as awkward collocations and incorrect forms of words; mirroring Ghasemi & Mozaheb (2021). Although inaccuracies still existed, task repetition and feedback may have opted speakers to refine their vocabulary.

Syntactic complexity remained largely unchanged. Most speakers defaulted to simple subject-verb-object (SVO) structures, while others attempted subordination or coordination with simple conjunctions. Most of these even resulted in redundancy or awkward phrasing. This reflected the cognitive demands of real-time spontaneous speech production. The modified 4-3-2 technique has encouraged speakers to rely on simpler structures. This limited them to expand their sentence structures or experiment, aligning with Kuiken (2022).

Taking Thai & Boers (2016) into consideration, corrective feedback was added as additional instructional support; however, it didn't lead to remarkable changes in the development of lexical and syntactic complexity as well as the overall speaking performance.

Attention capacity influenced trade-offs between linguistic aspects

The speakers in the study were observed to have prioritized delivering speeches fluently. However, this happened at the expense of correct grammar use and introduction of complex vocabularies and sentence structures.

Skehan's (2015) Limited Attentional Capacity Hypothesis explains this pattern. This hypothesis states that learners must allocate finite cognitive resources to various linguistic aspects competing for demand. This explains why fluency improved to a certain extent, as evidenced by the major changes across iterations, while grammatical accuracy remained stable, with errors in verb tense, articles, prepositions, and subject-verb agreement appearing in all attempts.

This trade-off relationship reflects similar findings from prior studies (Cao, 2018; Thai & Boers, 2016; Tran & Saito, 2024). However, it negates others who claimed that these three aspects of speaking performance needn't have to be in a trade-off situation (Yen, 2019).

The constrained effectiveness of feedback on accuracy highlights the role of cognitive load. Cognitive load is further emphasized by the limited feedback added in the technique. Although feedback aided speakers in formulating their speeches which led to minimized dysfluencies, and encouraged them to introduce new vocabularies and phrases, its impact on grammatical accuracy was limited by the virtual classroom's nature, such as time limit and lack of peer interaction.

Accordingly, speakers may prioritize retrieving vocabulary from memory faster over precision in grammar use or syntax, especially when under time pressure (Skehan, 2015). However, the observed attempts in self-correcting across iterations show that speakers have growing metacognitive awareness.

These findings also challenge prior research claiming that feedback can enhance accuracy without compromising fluency (Tran & Saito, 2024).

These further highlight targeted instructional strategies to successfully mitigate limitations in attention and mental demands in virtual classrooms.

The role of feedback and task repetition

Central to learners' progress is feedback and task repetition, which are the two main features of the modified 4-3-2 technique used in the study.

Skill Acquisition Theory (DeKeyser, 2018a) explains that repetition facilitates the shift from effortful formulation to automatic retrieval, freeing cognitive resources for lexical refinement (Sweller et al., 2022).

As emphasized in initial discussions, repetition helped the speakers apply structures, although limited; reduce cognitive load, mainly through three iterations; and improve lexical retrieval, by familiarizing of the same content, aligning with Bao's (2022) findings on fluency and accuracy in high school

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learners and Kim et al. (2018) on significant gains in vocabulary choices after repetitions. These also echoes Permata et al. (2020); the repetitive nature of the 4-3-2 technique enhances speaking ability.

The corrective feedback played a role in encouraging minimal changes in speakers' performance. In particular, it helped learners refine strategies and reduce disfluencies, supporting Li et al.'s (2016b) argument that timely feedback directs attention to problem areas. This also reflects Fukuta (2016) noting that task repetition allowed learners to focus on lexical expansion in subsequent attempts.

Feedback shows varied effects across the three aspects of speaking performance. Corrective feedback boosted fluency; speakers delivered a smother and more fluent speech in their final attempts. However, its impact on accurate grammar usage and use of the complex words and sentences was limited. This were all evidenced by existing errors in grammar until the third iteration as well as the reliance on simple sentence structures across all iterations. This aligns with Farrokhi et al. (2018) wherein corrective feedback doesn't play a significant role in the development of the complexity. However, it negates Farrokhi et al. (2018) on accuracy; in the present investigation, the observed changes in accuracy were limited.

This shows that some speakers struggled to internalize and adjust their grammar in real time, echoing Zhu & Wang's (2019): challenges exist in processing oral feedback. This shift also reflects similar findings to Garcia-Ponce et al. (2023).

In addition, the corrective feedback given in the speaking task was generalized and aimed to address all aspects instead of a targeted one. This may have overloaded the speakers and limited their attention; possibly affecting how efficiently they adapted to feedback. With this, virtual classrooms may require more explicit, targeted feedback (Li et al., 2016b).

In contrast, these results contradict the assertion of Al-Shareef (2016) that task repetition alone has minimal impact on speaking performance. This discrepancy may stem from differences in task repetition techniques used. More importantly, Al-Shareef (2016) study omitted feedback; whereas this study used the modified 4-3-2 technique. This leverage is backed by Swain's (1985) Output Hypothesis—feedback prompts learners to "notice gaps" and revise output (Pannell et al., 2017).

Skill Acquisition Theory (DeKeyser, 2018a) explains these findings: repetition facilitates the shift from effortful formulation to automatic retrieval, freeing cognitive resources for lexical refinement (Sweller et al., 2022).

Individual differences in speaking performance

Speakers' proficiency levels, responsiveness to feedback, and cognitive processing speeds, as individual differences, may have influenced the outcomes to a certain extent. It was observed in the study that higher-proficiency learners (e.g., Speaker 2) had remarkable progress in minimizing dysfluency markers, introducing new vocabulary, and varying sentence structures; whereas lower-proficiency learners (e.g., Speaker 1) struggled with following correct grammar rules despite observed minimal changes in other aspects of speaking performance.

The findings agree with Tran and Saito (2021). Specifically, learners with higher language proficiency are likely to effectively understand and use feedback.

By contrast, these results do not agree with Bao (2022). Both higher- and lower- proficiency speakers in the study didn't show remarkable changes in accuracy errors even until the final attempts in the speaking task. According to Galindo Ochoa (2017), extended attempts, as in more repetitions, may lead to significant changes in speaking abilities, especially for low-level learners or A1 proficiency level.

The influence of virtual learning on speaking performance

The findings also suggest that virtual learning conditions may have influenced speaking performance, particularly in terms of fluency development and feedback integration. The synchronous online setting allowed for structured task repetition, supporting previous research that virtual classrooms can facilitate speaking development through well-designed interactive activities (Dooly & Vinagre, 2022; He & Salam, 2022).

Nevertheless, digital barriers—such as cognitive overload from managing technology and reduced nonverbal cues—may have hindered the processing of feedback in the virtual classroom (Berry, 2019; Cheung, 2021; Herrera, 2017).

Implications of Overall Findings

This section deals with theoretical, pedagogical, and methodological implications of the overall findings.

Theoretically, these findings reinforce existing research in relation to task repetition and time-constrained speech production within the CAF framework. The observed improvement in fluency align with prior studies; repetition under decreasing time constraints boosts automaticity in speech production.

Fluency improved remarkably; however, accuracy and complexity remained relatively limited. This calls into question the assumption that repetition alone promotes all three CAF dimensions equally. This aligns with Limited Attention Capacity Hypothesis (Skehan, 2015), which illustrates that learners prioritize one linguistic over another, as in fluency over accuracy, when pressured with time. as well as Skill Acquisition Theory, which explains why grammatical accuracy showed little improvement—learners may not have had sufficient opportunities for controlled practice before transitioning to proceduralized knowledge.

Based on these findings, future inquiries may investigate how the nature of virtual classrooms influence the balance between the complexity, accuracy, and fluency, as aspects of speaking performance, in ways that differ from traditional face-to-face EFL settings. This may be done in consideration to the unique features of virtual classrooms, including constraints on interaction and feedback.

Pedagogical implications are also considered. Specifically, the most immediate implication requires a more structured approach to task repetition. This is to ensure that improvement in fluency will not come at the expense of other linguistic aspects, as in accuracy and complexity. This study confirmed that the modified 4-3-2 technique effectively reduced hesitations and improved speech continuity.

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However, many speakers continued to rely on simplified sentence structures and repetitive lexical choices even after two iterations. This meant that without additional targeted scaffolding apart from corrective feedback, repetition is insufficient for fostering sophisticated structures and varied lexical choices, as well as accuracy in grammar usage.

To address this, instructors may apply short explicit reformulation exercises before the next delivery attempt, given that the class time does not limit it. These may prompt learners to expand their sentence structures, integrate subordination, and vary their syntactic patterns. Similarly, pre-task planning activities wherein learners will outline more complex utterances before speaking. This can also be given asynchronously in order to possibly alleviate the cognitive demands formulating and producing speech in real time.

Another key consideration is the role of feedback in supporting accuracy development. Although feedback was provided during the speaking task, its impact on grammatical accuracy was limited. In this case, feedback may not only focus on immediate correction of errors but also add chances that encourage learners to analyze their own errors and consider alternative formulations.

Considering the nature of virtual classrooms, instances for monitoring own output such as post-task self-assessments and delayed corrective feedback could be particularly useful in boosting speakers' grammar awareness while minimizing disruptions to fluent delivery. Instructors might also consider adding the 4-3-2 technique with brief, targeted grammar review sessions in subsequent classes to address common errors observed during speaking tasks. These additions may potentially help minimize the trade-off.

Feedback can also be supported by interactive features like chat boxes and screen sharing in virtual classrooms, as mentioned by Al-Qahtani (2019). Teachers can leverage these when giving real time feedback. These further support the potential of the modified 4-3-2 technique, with its emphasis on feedback, to support speaking development in virtual environments.

Explicit instructional interventions may also be necessary to boost complexity. The findings stated that some speakers introduced new vocabularies in later attempts while others relied heavily on familiar vocabulary. This was likely used as a compensatory strategy to maintain a fluent delivery within the given time frame.

Thus, tailoring vocabulary-related feedback based on each learner's level of proficiency and targeting it to aspects where they most need, as well as encouraging them to experiment with more diverse word choices may boost their complexity.

Also, the limited changes in syntactic complexity imply that learners may require more direct guidance on sentence restructuring. Scaffolded sentence-building as part of planning before the speaking task can be considered. In these activities, learners may practice combining sentences using subordination and embedding relative clauses, which could help facilitate more sophisticated syntactic constructions in later speech attempts.

Another critical implication relates to the constraints imposed by virtual learning environments. Traditional face-to-face EFL classrooms have non-verbal cues, collaboration, and peer interaction. These can potentially boost language learning. However, virtual classrooms present unique challenges that may limit chances for major improvements specifically in speaking. As a result, it is necessary to optimize the technique in this setting.

With this, language teachers can take advantage of digital tools and use them strategically, either in giving feedback as mentioned or during the task itself. Teachers can also make use of shared documents for collaborative editing and recorded feedback for asynchronous review (Murphy-Judy, 2016; Stockwell, 2022). This multimodal feedback may initiate building more complex vocabulary, restructuring complex sentences, and correcting errors.

Also, short but frequent speaking tasks within virtual lessons could sustain improvement in speaking performance over time, given that these EFL learners take multiple speaking sessions.

From a methodological standpoint, task repetition techniques, as in the modified 4-3-2, may be adapted and adjusted to better support and balance the three CAF components. This is specifically necessary in virtual classrooms.

Future research may explore variations of the 4-3-2 cycle, as in incorporating an additional repetition focused on syntactic restructuring, alternating between fluency-driven and accuracy-driven cycles, or extending the speaking period to allow for more deliberate grammatical processing. The study was conducted within a short session in virtual format, so longitudinal studies may also follow the long-term effects of task repetition on speaking performance.

Ultimately, this study reinforces the value of time-based repetition and feedback for developing speaking performance while also identifying key areas where additional instructional support is potentially needed. More importantly, virtual EFL instruction can be better tailored to promote holistic speaking development in online classrooms by balancing fluency-focused repetition with accuracy- and complexity-driven scaffolding.

Future research directions are also provided, as in digital adaptations of repetition-based speaking tasks which may be optimized to enhance fluency, grammatical accuracy, and syntactic diversity in virtual classrooms.

IV. Conclusion and Recommendations

Overall, this study confirms that modified 4-3-2 technique influence EFL learners' speaking performance. On the one hand, repetition supports fluency development. Task repetition pushed learners to familiarize their content and deliver it fluently. On the other hand, feedback didn't lead to remarkable changes in learner's grammatical accuracy errors and syntactic complexity. It led to minimal changes in lexical complexity, but not the overall speaking performance. This reveals that additional instructional strategies, apart from corrective feedback, may be necessary when using the modified 4-3-2 technique to foster accuracy and complexity in virtual EFL settings.

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Based on the findings and discussion, the following are some of the recommendations:

Language teachers may use the modified 4-3-2 technique in their language courses when targeting English as a Foreign language learners' speaking fluency. Language learners may practice following the technique's format to boost their fluency levels.

The modified 4-3-2 technique is not sufficient for targeting remarkable improvements in complexity and accuracy. Thus, instructional support may be strengthened by integrating explicit grammar instruction before or after the task to reinforce accuracy. Pre-task planning can also be added to help learners produce more complex structures, while scaffolded exercises—such as guided error correction, sentence restructuring tasks, and post-task reflection—can aid in both grammar and sentence construction. Teachers may also encourage learners to experiment with a variety of sentence structures during the task to gradually use and apply more complex syntax.

Feedback delivery may be optimized to ensure a balance between fluency and accuracy. Providing targeted and delayed feedback may help improve accuracy without disrupting speech flow. To do this, feedback may be differentiated based on learners' proficiency levels. For instance, lower-proficiency learners may receive more explicit correction. Then higher-proficiency learners may be encouraged to engage in self-monitoring and peer feedback exercises. Digital tools, such as chat boxes and shared documents, are also suggested since these can facilitate corrections that are unobtrusive.

To accommodate the limitations of virtual classrooms, additional adaptations may be made. For instance, teachers may extend task duration or introduce additional practice rounds. AI-assisted tools can also be leveraged to reinforce grammar improvements, especially in understanding and correcting errors.

Finally, future research may examine more modified versions of the 4-3-2 cycle—such as adding more iterations for syntactic restructuring, alternating fluency- and accuracy-focused attempts, or extending time of an iteration for deeper grammatical processing. Since this study was limited to short virtual sessions, longitudinal research may be done to explore the long-term impact of task repetition and feedback on speaking performance in virtual EFL classrooms.

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