

Using trade-off hypothesis theory to explain differences between practising English alone and engaging in real-time communication

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Abstract. This study adopts the trade-off hypothesis as its theoretical framework, focusing on three key dimensions: complexity, accuracy, and fluency. It examines the differences in EFL learners' speaking performance between independent practice and real-time communication. The findings show that learners tend to use more complex and accurate sentences during independent practice, as the absence of time pressure and interactive feedback allows greater cognitive resources for planning and self-monitoring. By contrast, in real-time communication, learners prioritise fluency to ensure smooth interaction, often simplifying sentence structures and sacrificing accuracy. This difference does not indicate insufficient ability but reflects strategic trade-offs under limited cognitive resources. The study argues that oral performance is context-dependent and should be understood as the speaker's adaptation to the context, instead of a single-dimensional deficiency. Complexity and accuracy in independent practice reveal learners' potential, while simplifications in real-time communication reveal their strategic choices in authentic interaction. These dynamics underscore the close link between language output and cognitive resource allocation, offering new insights into learner strengths and limitations. The implications of this study lie in two aspects. Firstly, it helps learners understand their performance across contexts, thereby enhancing their confidence and developing more effective learning strategies. Secondly, it provides insights for oral pedagogy, suggesting that teachers can balance complexity, accuracy, and fluency in task design.

Keywords: EFL Learners, Trade-Off Hypothesis, Oral Practice, Speaking Performance

1. Introduction

This essay uses the trade-off hypothesis theory to explore why I produce more complex and accurate language when practising English alone, but simpler and less accurate language when communicating with others. The assignment starts with a brief introduction, then the context of this puzzle, followed by implications. In the second part, there is an explanation of the trade-off hypothesis from three dimensions: complexity, accuracy, and fluency. It then compares performance across contexts and develops new understanding of the dilemma. Finally, this essays concludes with the summary of whole study.

1.1. Puzzle and its context

As a second language learner, I need to not only acquire knowledge of English but also produce language effectively. For an international student like me, oral communication is vital in daily life, academic activities, and social interactions. According to my own experience, I perform differently when practising alone compared to communicating with others.

Specifically, when practising English alone, I feel confident experimenting with advanced sentence structures and varied expressions. This allows me to explore various ways of conveying the same meaning and thoughtfully choose the most suitable option. In addition, I can take the time to ensure that tenses are consistent within complex sentences and that verb collocations are utilised correctly. The lack of time pressure allows me to plan, reflect, and correct errors. However, in real-time interaction, I often sacrifice complexity for efficiency. Because I must respond immediately and ensure smooth conversation, fluency becomes my primary focus. As long as my expression clearly conveys the basic meaning, I don't place much emphasis on correcting grammatical errors. This difference between solitary practice and real-time interaction is not unique to me but has been widely observed in research on second language performance. Zhang [1], for example, found that IELTS candidates often prioritised fluency under time pressure, even if it meant sacrificing accuracy and complexity. Similarly, Sample and Michel[2] reported that young learners engaged in task repetition gradually improved fluency but became less attentive to accuracy, suggesting that limited cognitive resources lead to trade-offs across different performance dimensions. Previous studies across different contexts,

such as Indonesian vocational students' reflections on oral performance [3], further demonstrate that learners consistently perceive accuracy and fluency as competing goals. These findings indicate that my personal experience reflects a general pattern among language learners rather than an isolated case.

This raises the question: why am I better at using complex sentences and accurate structures when practising alone, but tend to simplify and lose accuracy when communicating with others in English?

1.2. The implication of puzzle

This puzzle is relevant to many EFL (English as a foreign language) learners. Understanding it can help learners interpret their language performance and make them accept the rationality of this difference, thereby building self-confidence. By acknowledging that the contrast between solitary practice and real-time communication results from inevitable cognitive trade-offs, learners can develop a more accurate meta-awareness of how language is produced under varying conditions. Such awareness allows them to distinguish between potential competence and actual performance, preventing the mistaken belief that simplified language in conversation reflects a lack of ability. It also reframes linguistic adaptability as a strength rather than a weakness. In this sense, adaptability can be seen as a higher-order competence that enables learners to strategically allocate their cognitive resources depending on contextual demands, aligning with broader models of communicative competence where effectiveness is prioritised over form perfection. This shift in mindset can significantly impact learners' motivation and reduce anxiety when speaking in real-time communication.

This dilemma also offers value for English teaching. The contrast between solo practice and communicating with others provides insights into learners' cognitive mechanisms and language usage habits. Attention can be shifted from error correction alone to the cultivation of learners' strategic competence, highlighting the need to prepare students for dynamic adaptation rather than static accuracy. Teachers can therefore design tasks to help learners integrate complex language structures into real-time communication. In this way, teaching design can more effectively narrow the gap between potential competence displayed in rehearsal and actual performance in interaction. Beyond individual tasks, curriculum design can also incorporate progressive stages, starting from controlled rehearsal and moving toward spontaneous communication. Such an approach not only helps learners transfer their skills more smoothly but also echoes recent shifts in oral assessment, where communicative effectiveness is increasingly prioritised over linguistic perfection [4]. What's more, engaging with this puzzle is also vital to direct future academic research. To illustrate, it is worthwhile to explore how technology or pedagogical approaches can help learners more efficiently balance complexity, fluency, and accuracy with limited cognitive resources, thereby improving the comprehensive language ability of students.

Exploring this puzzle challenges the stereotype that inconsistent oral performance indicates low ability, encouraging both educators and researchers to redefine excellence in language learning. Excellence could be seen as achieving communicative effectiveness in diverse contexts rather than uniformly excelling in accuracy, complexity, and fluency. By virtue of breaking down these biases, we can create a more inclusive framework for evaluating language proficiency.

2. Theory framework

Humans' short-term memory can hold about seven plus or minus two chunks [5], which limits available cognitive resources. Speaking English as a second language is a demanding task requiring people to balance complexity, accuracy and fluency. Skehan proposed a trade-off hypothesis that serves as a framework for explaining the process of language expression [6]. Second language learners tend to rank the three dimensions mentioned above according to their ability and environment and give priority to one of them, thereby promoting communication. Short-term memory does not simply constrain storage, but also limits processing capacity. According to Baddeley's working memory model [7], learners must simultaneously retrieve vocabulary, organise syntactic structures, and monitor their accuracy, while also planning for upcoming turns in interaction. For bilinguals, the need to switch between linguistic systems adds an additional layer of cognitive burden, making the trade-off among complexity, accuracy, and fluency even more salient.

Complexity refers to the richness of language expression and the ability to use more advanced words and sentences, such as compound sentences and special sentence patterns. It requires more cognitive resources, which can reduce fluency and accuracy. Fluency emphasises the coherence of language output, including the speed of speech, the smoothness of expression, and the efficient transfer of information [8]. To maintain fluency, learners may pay less attention to grammatical and lexical complexity, or even choose to simplify sentences to ensure speed of speech and natural expression. Accuracy concerns whether language expressions conform to the rules of the target language, including correct grammar, fixed collocations, and choice of phrases, which often requires a higher level of cognitive engagement [9]. Under social and personal pressure, learners may prioritise fluency or complexity at the partial expense of accuracy. The relationship between these dimensions reveals how short-term memory limitations affect language output strategies. When learners are confronted with complex situations or tasks, they need to continually assess their cognitive resource allocation and make adaptations between complexity, fluency, and accuracy [1].

2.1. The connection between puzzle and theory

In independent practice, learners often show higher complexity and accuracy, while fluency is less prioritised. An obvious feature of independent practice is that learners have more time to think and plan the language expression [8]. In such a situation, learners' short-term memory is not heavily occupied by external time pressure or interactive feedback, so more cognitive resources can be allocated to constructing complex sentence patterns and advanced vocabulary. For example, learners can spend time carefully constructing clauses and trying to incorporate abstract concepts or culture-specific expressions. This language performance is the result of deep cognitive processing and choice. The lower time pressure makes this resource allocation possible, which contributes to higher complexity. This pattern is consistent with Yuan and Ellis [10]'s research on pre-task planning. In specific, it illustrates that when learners were given planning time, their oral production contained greater syntactic complexity and lexical variety compared to immediate performance. Independent practice, therefore, provides a crucial condition for learners to mobilise their linguistic resources fully, without the constraints of interactional demands.

Similar to complexity, accuracy in independent exercises also improves significantly. This is because, without the pressure of real-time interaction, learners can engage in repeated self-monitoring and correction. Cognitive resources can focus on checking the correctness of grammatical structures, the appropriateness of vocabulary use, and the standardisation of intonation. The result of this resource allocation is that the accuracy of language output is effectively guaranteed [11]. Accuracy benefits from the opportunity to notice errors and refine output during the process of independent practice, which is rarely possible in real-time communication. By consciously attending to forms during solitary practice, learners strengthen their grammatical control. Furthermore, learners' affective states, such as reduced anxiety in private rehearsal, also facilitate more accurate and complex production. In low-stress settings, learners are more willing to attempt advanced structures, whereas under pressure, they tend to simplify to maintain fluency [12]. However, fluency enjoys a relatively low preference in independent practice compared to complexity and accuracy and may be sacrificed in favour of these two dimensions. This reflects a cognitive trade-off: when time is abundant, learners prioritise depth of processing over speed, directing their attention to accuracy and complexity rather than fluency.

In the context of communication with others, the goal of language output shifts from optimising complexity and accuracy to ensuring effective information transmission and smooth interaction. This shift results in a reallocation of cognitive resources that directly affects the dynamic balance between complexity, accuracy, and fluency. Fluency becomes the core concern of language output, and cognitive resources are prioritised for the speed and coherence of language expression [13]. The improvement of fluency ensures smooth communication and enables learners to complete effective information transfer within a limited time. In interactive contexts, learners must also process incoming speech, respond to interlocutors, and manage turn-taking, which significantly reduces the resources available for monitoring grammar or constructing complex syntax. Yamaoka [14] highlighted that fluency and accuracy often exhibit an inverse relationship in oral performance, as the prioritisation of rapid delivery typically undermines error monitoring. This trade-off illustrates why learners frequently opt for simpler, more accessible forms in order to sustain communication.

There is usually a reduction in complexity in communication compared to independent practice [15]. As learners need to organise language and respond quickly, cognitive resources are heavily occupied, which reduces the ability to monitor language and leads to an increase in errors. In other words, learners may ignore the correctness of grammatical tenses because they are in a hurry to express themselves or use words that are not entirely accurate. For instance, Zondag [16] demonstrated that improvisation activities help learners practise fluency in spontaneous speech while still encouraging the use of complex structures. Similarly, Asratie et al. [17] found that digital learning tools can support both fluency and accuracy simultaneously by reducing learners' cognitive burden and providing timely feedback. These studies indicate that, although trade-offs are inevitable, targeted task design and technology can mitigate their impact, enabling learners to transfer the complexity and accuracy achieved in practice into real-time communication.

3. New understanding

Firstly, limitations in language output are not weaknesses but rather cognitive strategies. The shortcomings in oral performance, such as the use of simpler sentence structures and lower accuracy during real-time communication, actually demonstrate learners' prioritisation decisions under constrained cognitive resources. Sacrificing certain dimensions mentioned in the trade-off theory is a reasonable choice to ensure the efficiency of information transmission [18]. In this sense, inconsistency in performance should not be interpreted as inability, but as evidence of adaptive resource allocation, reflecting learners' capacity to manage competing demands in real time.

Secondly, different circumstances determine the choice between complexity, accuracy, and fluency. Complex sentence structures are more suitable for solitary practice, while in interactive communication, simpler structures and appropriate compromises may better suit social requirements. Therefore, the evaluation of spoken English as excellent or deficient is not absolute but closely tied to its contextual adaptability. Moreover, the fluctuation in oral performance, such as the high level of

complexity and accuracy, is a flexible adjustment responding to different situations. Adaptability becomes the central indicator of communicative competence, since learners demonstrate proficiency by adjusting their performance to meet the demands of diverse contexts rather than by maintaining uniform standards across all tasks. Seen from this perspective, it is reasonable to measure learners' spoken English according to whether it aligns with contextual needs, such as interactive demands, instead of focusing on whether it conforms with the ideal standards of complexity, fluency, and accuracy[19].

Another main point is that complexity and accuracy observed in solitary practice can reflect learners' potential, since students can progress by experimenting with advanced sentences, while fluency and simplifications in real-time communication reveal learners' current English level and strategic choices, as students are prone to use more familiar phrases and sentence patterns. The disparity gives insight into the strengths and weaknesses of learners, pointing to potential areas for linguistic growth. Thus, educators can gain a more comprehensive understanding of where learners are and where they can progress.

Finally, language output is influenced by environment, stress, and resource allocation, so it is reasonable to show dynamic changes among these three dimensions in different conditions. Affective factors play a crucial role in this dynamic process. High levels of anxiety, for example, may push learners toward safer and simpler structures, while confidence can encourage speaking performance with more complex forms[12]. Recognising this interaction between cognition and emotion highlights that trade-offs are not fixed constraints but context-sensitive adjustments. Ultimately, this understanding redefines oral performance variability as a sign of resilience and adaptability, reinforcing the idea that flexibility, rather than perfection, is the hallmark of successful language use.

4. Conclusion

The trade-off hypothesis explains why language performance differs between solo practice and real-time communication[20]. These distinctions are not signs of insufficient ability but reflect learners' strategic choices and adaptive adjustments under limited cognitive resources. According to the theory, learners prioritise the efficiency of information delivery due to limited cognitive resources and, therefore, often simplify sentence structure and reduce accuracy in communication to meet situational demands[21]. While solo practice reveals learners' language potential through greater complexity and higher accuracy, real-time interaction reveals their strategic priorities to ensure effective communication.

Additionally, situational demands play a critical role. Language output is meant to fulfil specific communicative needs rather than achieve perfection in every dimension. On a personal level, understanding these performance variances provides valuable insights into learner strengths, limitations, and areas for development. On a broader level, the dynamic process of spoken English brings value to cultivating adaptive strategies and educational methods that balance competing dimensions in different communication situations.

Ultimately, this study demonstrates that oral performance should be evaluated not by static standards of accuracy or complexity alone, but by learners' ability to adapt to diverse contexts and manage competing demands effectively. Such an approach reshapes inconsistency as a form of resilience, positioning adaptability as a central marker of communicative competence. Future research can build on these insights by examining how technological tools, task-based design, and affective support can help learners transfer their potential from solitary practice into authentic communication[22]. In this way, the trade-off hypothesis not only explains current performance differences but also offers a foundation for redefining language learning excellence in both pedagogy and assessment.

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