Original Research Article

Exploring Trade-off Between Complexity, Accuracy and Fluency in IELTS Speaking

Suheng Zhang

University of Manchester, Oxford Rd, Manchester, M13 9PL, UK

Abstract : This essay explains the rationale underpinning the phenomenon that it is difficult to simultaneously perform well in the dimension of complexity, accuracy and fluency in IELTS Speaking by the use of **Trade-off Hypothesis** and **Skill Acquisition Theory**, which gives implications for IELTS Speaking learning.
Keywords: IELTS Speaking; Trade-off Hypothesis; Skill Acquisition Theory; Complexity; Accuracy; Fluency

1. Introduction

In this essay, I would describe my EFL learning context and come up with my puzzle from my context about IELTS Speaking and then employ the skill acquisition theory to analyze my puzzle from a skill-based perspective and next generate new theory-based understandings. Lastly, conclude the assignment with some implications for IELTS Speaking learning.

2. Learning context and puzzle

I am an EFL learner from China. I have learned English for over 15 years since I was a primary school student. However, I was not able to normally communicate with native speakers under the exam-oriented English education, in which speaking test is very easy and accounts of a very small proportion in the exam, until I started to learn oral speaking on my own efforts in Chinese university due to the fact that I realized learning English is not only for passing the exams but also as a tool for international communication. From then on, I can communicate with native speakers in simple English. Although My major was not English in the phase of bachelor, English was still a compulsory subject for all undergraduates, and some pragmatic optional courses pertaining to English such as business English, English interpretation were provided to choose, thus I keep learning English and chose English literature as a complementary major to meet my requirement of having more educational resources and opportunities to enhance English proficiency under the tutors' help. These courses contribute to the results that I made great progress in reading and writing rather than listening and speaking, the same problems as most Chinese EFL learners since teachers always speak a large amount of Chinese instead of English in class, causing that students lack English learning environment. For enhancing my English-speaking proficiency and also preparing for my application of admission from UK university, I started to learn IELTS (The International English Language Testing System), which is widely recognized as "a reliable means of assessing whether candidates are ready to study or train in the medium of English" [1]. The test was classified into four parts: listening, reading, writing, and speaking. To assess my initial English level before much effort on the preparation of the test, I participated in the test and got the band of 6.5, 7, 6.5, and 6 in listening, reading, writing, and speaking respectively. Since I performed less proficient in speaking than other parts, I spent more time exploring speaking techniques and relative assessing criteria in speaking part and paying for a native speaker teacher to practice speaking with me 1.5 hours per week, aiming to get a higher score in the test. Regarding the IELTS Speaking assessment criteria, the speaking proficiency is judged by four aspects: fluency and coherence, lexical resource, grammatical range and accuracy, pronunciation according to the IELTS Speaking band descriptors (Public version) (as shown in Appendix) [2]. The descriptions generally reflect my actual situation. I can use a wide range of vocabulary and a mix of simple and complex structures to discuss the topic though with inappropriate pause, hesitation, repetition, or self-correction. Every time I practice topic speaking, I found that when I tended to accelerate the speed of speech to show my fluency to my tutor, some grammatical mistakes would appear and it seems that I would easily forget to use the advanced vocabulary and complex structures at that moment, which is also another dimension to show my speaking proficiency. On the other hand, when I tend to speak accurately without grammatical mistakes, use less common and idiomatic vocabulary and complex structures, my speed of speech would come down. It seems that it is difficult for me to simultaneously perform well in these dimensions and I wonder if there is any psychological theory to help me analyze this interesting phenomenon that appears in my IELTS Speaking and generate new understandings.

3. Theory and new understandings: *The Trade-off Hypothesis; The Skill Acquisition Theory*

3.1 The "Trade-off" Hypothesis

Many scholars advocate the use of three notions of complexity, accuracy, and fluency to assess the second language performance and proficiency [3]. The speaking, as an integral part of L2 learning is no exception. CAF has been commonly used to describe the L2 speaking performance . Actually, My IELTS Speaking proficiency is also assessed by the dimensions including complexity, accuracy, and fluency according to the IELTS Speaking band descriptors I mentioned above. Complexity was defined as "the extent to which the language produced in performing a task is elaborate and varied" , accuracy as the ability to produce "error-free" speech and fluency as the ability to speak L2 in a "native-like" speed [4] or "the extent to which the language produced in performing a task manifests pausing, hesitation or reformulation" . Subsequently, Skehan brought the three dimensions of fluency, accuracy, and complexity together and proposed The Trade-off Hypothesis, which portrays the "tension" between them (complexity, accuracy, and fluency). The tension is attributed to the limited attentional resources and working memory that is required to the performance in each area of complexity, accuracy, and fluency [5], which means allocating the limited attentional resources to one dimension will bring a negative impact on others. For example, one can use challenging, complex, and accurate second language at the expense of speed fluency or speaking fluently at the expense of accuracy and complexity. Looking back into my performance in IELTS Speaking, I understand my puzzle on the basis of the theory. Due to the limited attentional resources, I am not able to simultaneously perform well in every dimension. If I tend to allocate my attentional resources to the fluency (e.g., increase in rate; decrease in inappropriate pauses and repetitions), the attention for the accuracy (e.g., error-free in grammar, native-like expressions) and complexity (e.g., advanced lexis, complex syntax) will decrease while if I allocate my attentional resources to the accuracy and complexity, the attentional resources for the fluency will decrease thereby the fluency of my speech decreases. This phenomenon, just likened to the balance property of scales: an increase in one side will cause a decrease in another side, vice versa, is consequently defined as "trade-off". To deepen the understandings of the "trade-off" phenomenon, I will analyze the puzzle from the skill-based perspective in the following part.

3.2 The skill acquisition theory

The basic claim of "Skill Acquisition Theory" is that "the learning of a wide variety of skills shows a remarkable similarity in development from the initial representation of knowledge through initial changes in behavior to eventual fluent, spontaneous, largely effortless, and highly skilled behavior, and that this set of phenomena can be account for by a set of basic principles common to the acquisition of all skills". Anderson proposed the process of skill acquisition can be into three stages: declarative, procedural, and automatic. In the first stage, learners attain new knowledge related to a skill either from others' (e.g., parents or teachers) oral instructions or observation of others' behaviors or the combination of two. In this stage, declarative knowledge (e.g., mathematical formulas, historical facts) was stored or "encoded in memory" , which means the learners understand "what it is". Besides, a large amount of attention is required to concentrate on acquiring the declarative knowledge because the initial stage of learning a new skill is relatively difficult. In the next stage, after knowing the declarative knowledge of a specific skill, the learners start to "act on" the knowledge into behavior, namely, turn declarative knowledge into procedural knowledge, the switched process of which is "proceduralization" . Procedural knowledge entails knowing "how to do", namely, knowing how to execute the operations smoothly, rapidly with no or less effort and attention after lots of repetition and practice. Once the process of procedualization is completed and the learners have successfully acquired the procedural knowledge, the learners are likely to reach the automatic stage, in which "the relevant behavior can be consistently displayed with complete fluency or spontaneity, rarely showing any errors"[6] through a large amount of practice, despite not everyone can reach this stage. [7]. Actually, second language acquisition such as learning speaking also pertains to skill acquisition. The process of learning speaking contains the gradual transformation from effortful use to more automatic use. In the first stage of my speaking learning, I would read some IELTS Speaking instructive books for the topic-related information input. For instance, I would read and try to memorize some words, lexical chunks, sentence structures, and so forth related to the speaking topic before I practiced speaking with my tutor. The process of recognizing and memorizing these kinds of knowledge (declarative knowledge) is time-consuming and required lots of attention. In this stage, I know about the related lexical chunks or complex sentence structure but I have difficulties in coming up with the new linguistic resources stored in my memory and speak them out fluently, which accounts for the phenomenon that when I tend to increase fluency in my speech, the grammatical errors will appear and complexity of structure will decrease; when I tend to use advanced vocabulary and complex structures to produce less error speech, the inappropriate pauses and repetition will increase. I have already known the new linguistic knowledge but not able to perform them in an easy and effortless way. Consequently, aiming at transmitting the declarative knowledge to procedural knowledge, except for the continued knowledge input from either books or tutors, I spend much time repetitively practice the topics speaking with tutors according to the following routine. Firstly, I would make efforts to use some "risky language" [8] such as complex lexis and sentence structure despite the possibilities of making mistakes and consuming more time. Next, I would strive for the avoidance of errors, possibly with the expense of advancement and complexity of language and fluency to provide more time to achieve higher accuracy. Thirdly, I would try to push the speed of speech on the basis of familiarity with advanced lexis, lexical chunks, and sentence structures. Through the repetition of the routine, including effective knowledge input and speaking practices, the complexity, accuracy, and fluency of my speech are enhanced to some extent by reducing the pauses, errors without much brain effort. In this stage, I successfully turn the declarative knowledge into the procedural knowledge, despite that some grammatical errors would still appear when I speak quickly. After all, to reach the automatic stage, I still have a long way to go.

4. Conclusion

In summary, the Trade-off" Hypothesis accounts for the unbalanced phenomenon between complexity, accuracy, and fluency. Allocation of the limited attentional resources to one dimension will result in a negative effect on other dimensions. And then the skill acquisition theory further explains why there is a trade-off phenomenon among CAF for me (an EFL learner). It helps me understand the process of learning IELTS Speaking is like learning skills (e.g., driving cars, learning swimming, make cakes), lots of repetition or rehearsal is required to help switch from declarative knowledge to declarative knowledge in speaking learning. In

other words, in the declarative stage, we know the related linguistic knowledge and speech techniques to achieve CAF in IELTS Speaking from teaching material and tutor's instruction, but we cannot successfully simultaneously perform them well to some extent until the proceduralization of declarative knowledge through speaking practice, thereby explain the reason why there is a trade-off phenomenon among CAF in the process of learning IELTS Speaking.

Last but not least, it gives me the implication that repeated performance of the same or almost similar tasks contributes to greater accuracy and fluency. Skehan and Foster (2007) also stated "dialogic tasks lead to greater accuracy and complexity" (p.4). These tasks can be manipulated to maximize the performance of complexity, accuracy, and fluency even though these three areas may be in competition with each other.

References:

[1]Charge, N. and Taylor, L.B. (1997). Recent developments in IELTS. *ELT Journal*, 51(4), pp.374–380.

[2] IELTS. (2021). *IELTS Speaking band descriptors(public version)*. [online] Available https://www.chinaielts.org/pdf/UOBDs_SpeakingFinal.pdf [last accessed 28.1.2021]

[3] Housen, A., Kuiken, F. and Vedder, I. (2012). Complexity, accuracy and fluency in second language aquisition. In *Dimensions of L2 Performance and Proficiency*. Amsterdam: John Benjamins Publishing Company, pp. 1–20.

[4] Housen, A. and Kuiken, F. (2009). Complexity, accuracy, and fluency in second language acquisition. *Applied Linguistics*, 30(4), pp.461–473.

[5] Skehan, P. (2009). Modelling second language performance: Integrating complexity, accuracy, fluency, and lexis. *Applied Linguistics*, 30(4), pp.510–532.

[6] Dekeyser, R. (2007). Skill acquisition theory. In B. Vanpatten & J. Williams, eds. *Theories in Second Language acquisition:an introduction*. New York: Routledge, pp. 94–112.

[7] Palacio, N. and Stelma, J. (2020). *Information-processing theory.* Unpublished course unit handout. University of Manchester, UK.

[8] Skehan, P. and Foster, P. (2007). Complexity, accuracy, fluency and lexis in task-based performance:a meta-analysis of the Ealing research. In P. Van Daele et al., eds. *Complexity, accuracy, and fluence in second language use, learning, and teaching*. Brussels: University of Brussels Press, pp. 207–226.