

Exploring Trade-Off between Complexity, Accuracy and Fluency in Ielts Speaking

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Abstract: With the rising fever of going abroad and studying abroad, more and more candidates have joined the ranks of the International English Language Testing System (IELTS). IELTS oral test examines candidates' ability to communicate in English in real context. Based on the theory of complex dynamic system, this study tracks the dynamic development of Chinese learners' oral fluency in IELTS, and explores the interaction among complexity, accuracy and fluency by using mobile correlation technology. This study shows that complexity and accuracy are in a competitive relationship at the initial stage of the study, and gradually turn into a supportive relationship at the later stage, that is, they develop synergistically, which proves the comprehensive characteristics of complex dynamic system theory. Oral English development is complex, dynamic, multidimensional and sensitive to initial values.

1. Introduction

International English Language Testing System (IELTS) is an international examination designed and implemented by the local examination committee of Cambridge University, the British Council and the Australian University International Development Agency. The examination system mainly tests the language proficiency of candidates from non-English speaking countries who are going to study or work in English speaking countries (mainly Commonwealth countries) [1]. IELTS consists of listening, speaking, reading and writing. All candidates take the same listening and speaking tests, while reading and writing require candidates to choose academic and general training questions according to whether they receive higher education or participate in non-academic training or immigration.

IELTS speaking ability is still the weakest link for Chinese learners. Based on the complex dynamic system theory, this study tracks the dynamic development of the complexity and accuracy of learners' IELTS oral output [2], and tries to explore the interaction between them by using the variability analysis technology of complex dynamic system theory for the first time, in order to put forward some feasible suggestions for improving learners' oral level.

2. Positive Backwash Effect of Ielts Oral Test on English Teaching in China

In addition to the backwash effect on teachers' teaching, students' learning and teaching materials, the test also has the backwash effect on macro teaching ideas, especially on teaching

methods and learning methods. From a macro perspective, IELTS, especially oral test items, has promoted the reform of English teaching in China, and promoted the improvement of English teaching in China. Its positive backwash effect is far greater than its negative backwash effect.

2.1 Positive Backwash of Teaching Philosophy

Since IELTS scores are average in listening, speaking, reading and writing, and the importance of listening, speaking, reading and writing skills is equal in IELTS, English teaching in China is no longer just about cultivating students' English reading ability, but instead, it is about developing students' listening, speaking, reading and writing skills hand in hand.

The scoring method of IELTS oral test organically combines the traditional impression method (which mainly examines whether the communicative purpose is achieved or not and the overall impression) with the analytical method (which focuses on evaluating the basic knowledge and usage of language). This scoring method not only has objective and meticulous scoring basis, but also takes into account the examiner's subjective evaluation of the overall impression of candidates' oral expression. This scoring method is more scientific, and the reliability and validity of scoring are greatly enhanced.

2.2 Positive Backwash of Teaching Methods

IELTS is an English language proficiency test for those who intend to study or work in countries or regions where English is the language of communication. Its purpose is to test the necessary language proficiency of this group, so as to ensure that they can communicate, study and work in English fluently after entering English-speaking countries or regions. China's Ministry of Education puts forward the requirements of “two benefits” for the college entrance examination: one is to help colleges and universities select outstanding students, and the other is to help middle school teaching [3]. It can be seen that the function of English test in NMET is mainly to serve the selection of talents in colleges and universities and to reverse the teaching in middle schools.

As IELTS oral test adopts the task-based test method of face-to-face communication between examiners and examinees, and tests examinees' oral communicative competence by letting examinees complete certain tasks, that is, talking about topics familiar to examinees related to study and daily life, communicative teaching method and task-based teaching method are favored in China.

2.3 Positive Backwash of English Learning

Another characteristic of oral examination is that the topics involved in the examination are closely related to daily life, such as personal interests, hobbies, hometown, Chinese places of interest, celebrities, and so on. It can be seen that the test questions are not partial or strange questions, but topics related to the examinee's life. Compared with examining pronunciation and grammar, it pays more attention to whether students can use language properly to complete communicative tasks [4]. In addition, the examinee's preparation time is short, which accords with the actual situation and rules of daily communication, and can reflect the examinee's adaptability and communicative ability.

Because if you want to participate in IELTS, Chinese candidates will have greater motivation to learn English and will be more active in learning. Because the examination includes listening, speaking, reading and writing, and each score has equal weight in the total score, the examinee will not only pay attention to the cultivation of his “input” ability, but also pay attention to the exercise of the more difficult “output” ability, and at the same time actively increase the amount of “input”.

In terms of learning content, candidates will pay more attention to choosing authentic English learning materials to improve their scores in IELTS.

3. Balance among Complexity, Accuracy and Fluency of Ielts Speaking

This study aims to answer two questions:

(1) What is the trend of learners' oral fluency (speed fluency, interruption fluency and correction fluency)? Is there a high degree of variability?

(2) What is the interactive relationship among oral complexity, accuracy and fluency?

Chat (Codes for the Human Analysis of Transcripts) is the transliteration standard adopted in this paper, and specific error markers suitable for the corpus of this study are added. CLAN is the corpus analysis tool used in the study. For some more detailed analysis, besides manual methods, Syllable Counter is used to help count syllables, and PRAAT, a professional audio analysis software, counts the length and times of silence [5].

In this study, the scatter chart in Excel chart is used to show the development track and trend of oral complexity, accuracy and fluency. This chart is most suitable for presenting data that changes with time. On the basis of the scatter chart, this study also uses the polynomial trend line in the trend line to assist in observing the development trend.

3.1 Complexity

Firstly, the study investigates the average of oral complexity among groups and depicts the overall development trend. In order to show the development trend intuitively, the author uses the smoothing technique and adds a binary polynomial trend line to the graph. It can be seen that the syntactic complexity of ten subjects (as a whole) is on the rise (see Figure 1). The group development track of vocabulary diversity is in a trend of rising first, then falling and then rising slightly (see Figure 2). On the whole, the development of syntactic complexity and lexical diversity of the ten subjects has been improved.

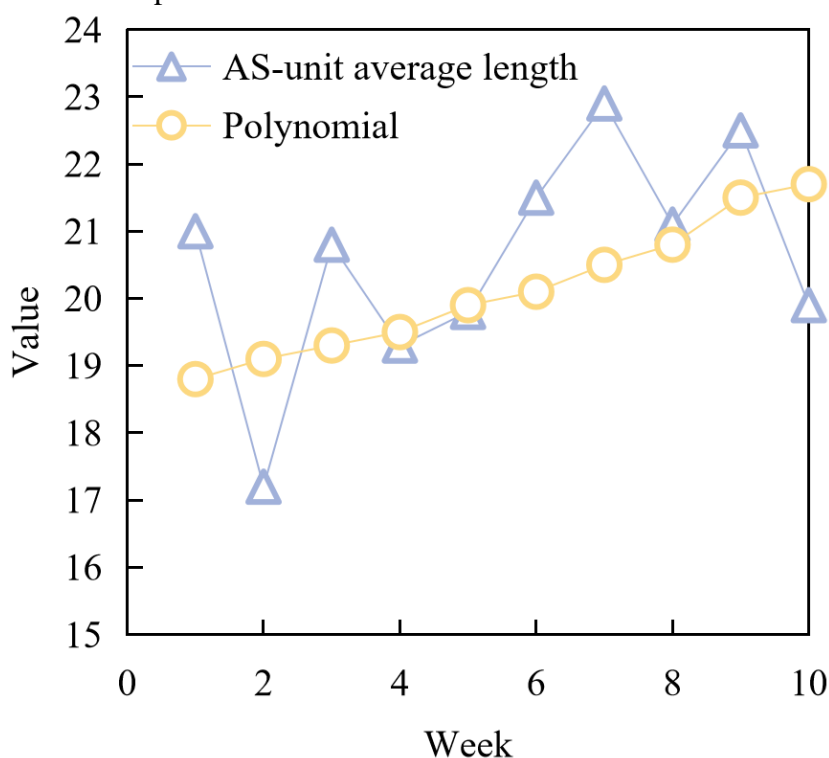


Fig.1 Group Average of Syntactic Complexity

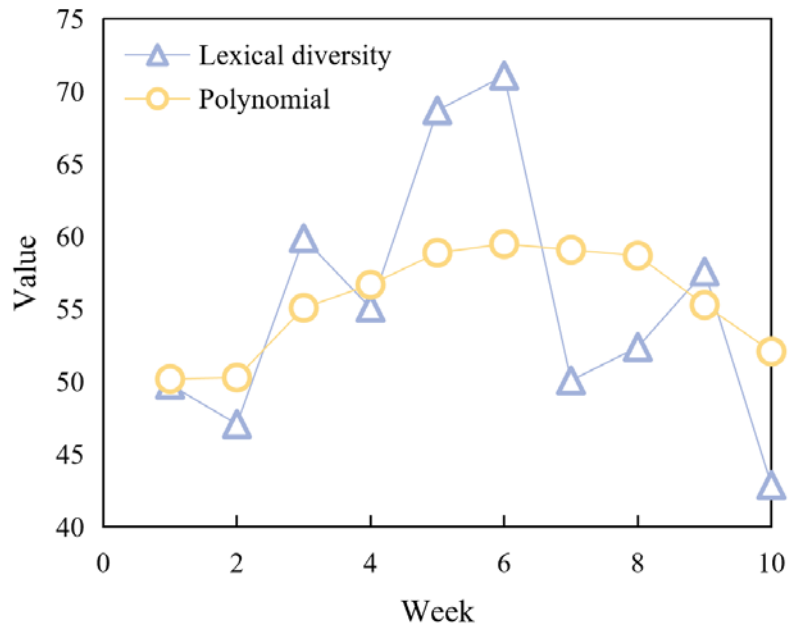


Fig.2 Mean Value of Vocabulary Diversity Group

3.2 Accuracy

The average of grammatical accuracy (overall) AS-unit without grammatical errors and (specific) past tense usage accuracy of ten subjects are plotted as Figure 3 and Figure 4. It can be seen that the AS-unit value of ten subjects without grammatical errors is on the rise, indicating that the grammatical accuracy (overall) and (specific) are improved.

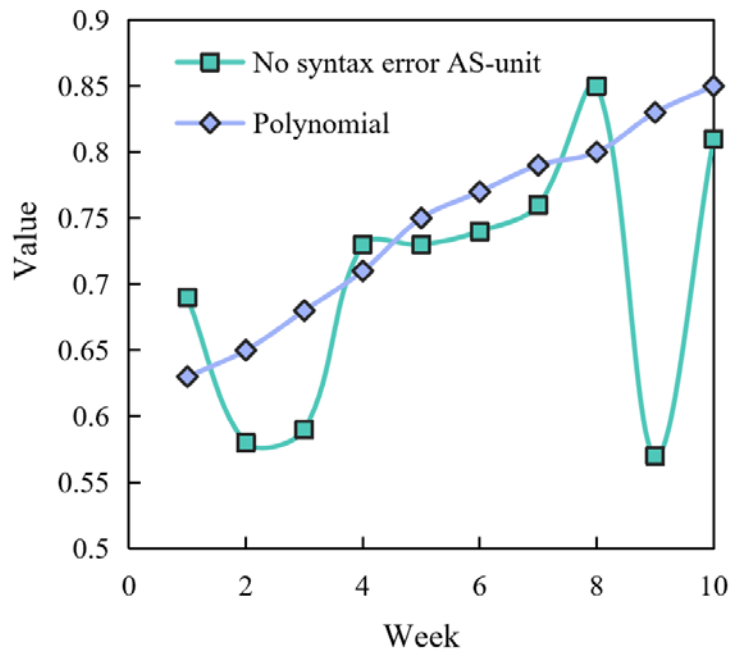


Fig.3 Group Average of Grammatical Accuracy (Overall)

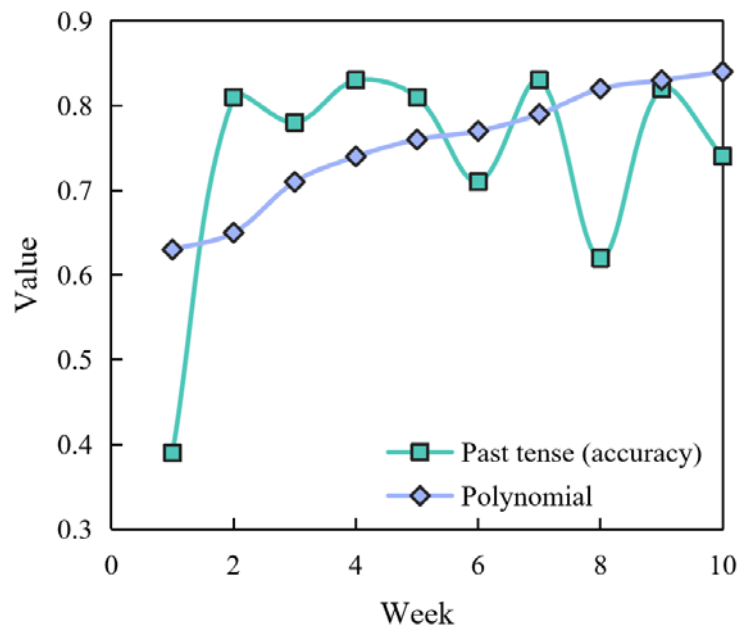


Fig.4 Grammatical Accuracy (Specific) Population Average

3.3 A Dynamic Model of the Development Track of Complexity, Accuracy and Fluency

By observing the development track of learners' complexity, accuracy and fluency indicators, this study found a major development model: curve decline type. The development track has a clear downward direction, including a gentle downward trend (as shown in Figure 5) and a downward trend in small fluctuations. Each learner has 1-3 indicators that belong to the curve-descending type. Among the indicators of complexity, accuracy and fluency, the number of effective syllables per minute is quite special, and the development track of the number of effective syllables of four learners is a curve decline type.

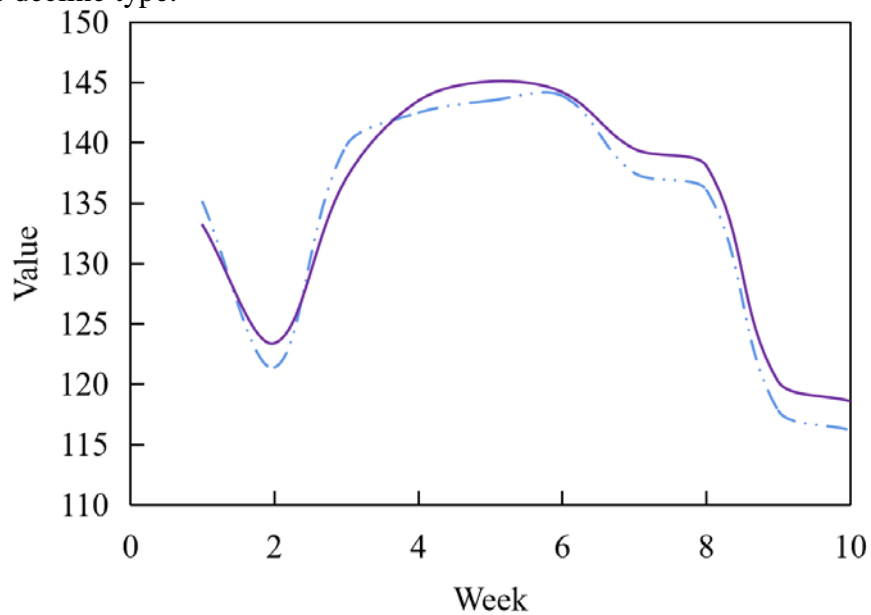


Fig.5 Illustration of Curve Descending Development Mode

4. Discussion

By analyzing the development of complexity and accuracy of learners' IELTS speaking output, we observe that both complexity and accuracy are on the rise at the level of average between groups, which is contrary to the research in literature [6]. The subjects selected in Literature [7-8] are immigrants who have not received formal education. For them, the urgent communicative pressure in life (to survive in the new social environment) and the lack of systematic external control (such as teachers, examinations, etc.) are the main factors that affect the stagnation of their grammatical accuracy. Second language system develops in internal fluctuation [9]. With the increase or decrease of variability in the development track of individual learners, two different development modes of complex dynamic system are presented in the later stage: attraction (stable development state) or repulsion (fluctuating development state). Even in a steady state, complex systems will show varying degrees of variability.

Some indicators of complexity, accuracy and fluency have special development patterns. Among the indicators of complexity, accuracy and fluency, there are two learners in vocabulary diversity, pronunciation accuracy and intonation accuracy respectively, which are more than other indicators, which means that compared with other indicators of complexity, accuracy and fluency, these three aspects are easier to achieve steady improvement. In addition, the curve decline is not common, but the development track of effective syllables per minute of four learners is curve decline. This shows that on the one hand, the number of effective syllables per minute is mainly regressive for most learners during the observation period, and on the other hand, the decline of the number of effective syllables is steadily declining.

It is the first time that the author tries to use mobile correlation technology to investigate the interactive relationship between complexity and accuracy. The results show that the interactive relationship between complexity and accuracy also changes with time, showing a positive correlation, that is, supportive relationship. In other words, the improvement of complexity is accompanied by the improvement of accuracy. To some extent, this supportive relationship also explains the changing reasons of the development trend of each subsystem of fluency. After adjustment and running-in, the subjects' oral fluency and accuracy changed from competitive relationship to supportive relationship in the later stage, and they developed synergistically. This shows that different research designs, observation methods, measurement indicators and statistical methods have an important impact on the research conclusions, so it is of certain significance to conduct dynamic follow-up observation for foreign language learners.

5. Conclusion

The content of IELTS oral test is close to life, and the examinee's language communicative ability is tested through questions and answers, descriptions and talks. The scoring method and standard are more scientific and have higher validity and reliability. Oral examination is an integral part of IELTS. Besides confidence and perseverance, proper learning methods are very important for candidates to improve their IELTS scores. Based on CDST, this study traces the development trend of oral fluency of Chinese English learners and explores the dynamic interaction among complexity, accuracy and fluency, which provides a new perspective for second language research and teaching. It is not only helpful to improve the complexity of oral output, but also helpful to promote the development of its accuracy. Exploring the dynamic development track of complexity and accuracy of learners' IELTS oral output will help teachers understand the changing trend of learners' oral development. In the actual teaching process, teachers can adjust or improve oral teaching methods accordingly, and solve the problems in oral teaching more pertinently, so as to improve learners' oral IELTS ability.

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