English Language Teaching and Linguistics Studies
ISSN 2640-9836 (Print) ISSN 2640-9844 (Online)
Vol. 5, No. 3, 2023
www.scholink.org/ojs/index.php/eltls

Original Paper

Exploring Dynamic Development of Listening Comprehension Difficulties: A Longitudinal Case Study of EFL Learners

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Received: June 28, 2023 Accepted: August 11, 2023 Online Published: August 24, 2023

doi:10.22158/eltls.v5n3p349 URL: http://dx.doi.org/10.22158/eltls.v5n3p349

Abstract

This study employed Dynamic Systems Theory to investigate the Listening Comprehension Difficulties (LCD) trajectories of two EFL learners. Through a longitudinal case study spanning a semester, LCD in five listening tasks was assessed using four indicators: vocabulary difficulties, familiar word difficulties, weak form difficulties, and chunk difficulties. Key findings included: 1) distinct nonlinear and intricate trajectories were observed for both learners, diverging from group averages; 2) semi-structured interview showed that individual pathways were influenced by interwoven factors including environmental variables (language policy, linguistic milieu, learning environment, etc.), linguistic factors (task complexity, language apprehension, native language transfer, etc.), and individual differences (e.g., self-regulation strategies, language anxiety, etc.).

Keywords

listening comprehension difficulties, perceptual stage, inter-individual variability, intra-individual variability

1. Introduction

Language proficiency comprises listening, speaking, reading, and writing. In English language teaching, there is often a predominant focus on oral and written production, with comparatively less attention given to the input skills of listening and reading. Listening is frequently mistaken for a passive skill that can be developed through speaking and reading in a natural way. Consequently, in both classroom practice and academic research, listening skills have not received sufficient attention when compared to other language skills (Richards, 2005; Rost, 2011; Vandergrift, 2004). Indeed, listening comprehension provides a foundation for the development and successful acquisition of other language skills (Hasan, 2000). However, nearly all language learners encounter difficulties when listening to the target language, with the types and degrees of difficulty varying among individuals (Goh, 2000). Chinese

EFL learners, as a unique group, generally encounter prolonged learning periods and lower learning outcomes. Under the pressure of various English proficiency exams both domestically and internationally, the obstacles faced by this group during the listening comprehension process deserve further attention. Raising learners' awareness of their listening challenges, overcoming listening difficulties, and utilizing effective listening strategies are pressing concerns for language researchers and listening instructors (Namaziandost et al., 2019). Simultaneously, it is worth noting that previous research has indicated a limited body of longitudinal case study and time-series data changes.

In the following parts, theoretical basis will be introduced encompassing three aspects: theoretical framework, aforementioned studies and conceptual domain of listening comprehension difficulties.

1.1 Theoretical Framework

In relation to the theoretical framework, Dynamic Systems Theory (DST) is utilized to serve as conceptual basis. A branch of theoretical mathematics known as DST has unearthed its utility across diverse domains, encompassing epidemiology, economics, and meteorology, fields that collectively scrutinize phenomena deviating from predictable developmental trajectories (Verspoor et al., 2011). The integration of DST into the realm of Second Language Acquisition was effectuated by de Bot, Lowie, and Verspoor (2007), subsequent to the pioneering work of Larsen-Freeman (1997). Within this framework, the assertion prevails that language operates as a dynamic system, subject to alteration through the imposition of various forces, be they continuous, discontinuous, or even characterized by chaotic dynamics (Verspoor et al., 2011).

In the domain of Dynamical Systems Theory (DST), the concept of variability assumes a pivotal role, being the very information that should be regarded as part of the behavior of the system rather than noise to be discarded (van Geert & van Dijk, 2002). If variability is smoothed away, by averaging, for example, we may lose the very information that may shed light on emergence (Larsen Freeman, 2008). Variability has been studied as the effect of fluctuations of relative stability and instability in one or more subsystems (Lowie, 2017). There are usually dual ways to measure it. One is variability with stability, namely, the degree of variability around the mean serves as "an index of the strength of the behavioral attractor" (Thelen & Smith, 1994). The other measurement uses the outcome of perturbing or pushing the system away from its stable behavior (Hiver & Papi, 2020). The first measurement has been widely employed in writing and oral dynamics of individuals both at home and abroad, by way of moving min-max graphs as well as Monte Carlo Simulations (Verspoor et al., 2011). Within this framework, two distinct classifications of variability emerge. The first category encompasses inter-individual data slices, encompassing data pooled from a cohort of individuals assessed at a single point in time across a predefined set of variables. On the other hand, the range of intra-individual data slices encapsulates data derived from an individual over a sequence of successive instances, a paradigm epitomized by Molenaar (2015).

Within dynamic systems, subsystems exhibit intricate interconnections, engaging in mutual interactions while demonstrating comprehensive interlinkages. The representation of linguistic constituents, serving

as symbols, encompasses both syntagmatic and paradigmatic relationships, spanning phonemes, morphemes, words, sentences, and discourses. Conversely, disparities in the allocation of system resources, constrained by their finite nature and uneven dispersion, engender dissimilar developmental trajectories across individual subsystems. While certain subsystems synergistically bolster one another, fostering robust correlations, others vie for restricted resources, thereby precipitating a scenario where the advancement of one subsystem potentially triggers the regression of another (Verspoor, Lowie, & van Dijk, 2008). Simultaneously burgeoning variables garner the label of connected growers, whereas those engaged in competition assume the role of mutual competitors.

1.2 Conceptual Domain of LCD

In relation to conceptual domain of listening comprehension difficulties, it consists of three stages, i.e., perception, parsing, and utilization difficulties, according to Anderson (2000, 2015). These three interconnected stages of listening comprehension challenges encompass a range of intricacies that language learners confront during the process of listening.

In the perceptual stage of listening, the listener engages in the encoding of spoken or written information, entailing various challenges pertaining to word linkage, phonological distinctions, recognition of familiar vocabulary, vocabulary retrieval, accent comprehension, and phoneme identification. A significant proportion of these barriers arise from the divergences between the listener's native language and the target second language. For example, a salient contrast between Chinese and English lies in their respective rhythmic characteristics, where English relies on stress-based patterns while Chinese employs syllabic patterns. Consequently, Chinese English as a Foreign Language (EFL) learners are influenced by the rhythmic norms of their native Chinese language, which restricts their flexible adoption of English rhythmic techniques, such as stress, liaison, omission, and weak reading patterns (Chen & Wang, 2013). As a result, they tend to omit or weakly articulate connectives when processing auditory input signals.

The parsing stage pertains to the cognitive process by which the listener transforms the constituent words within the message into a mental representation of the coherent meaning of the utterance. This stage encompasses various challenges, including sentence comprehension, intention discernment, lexical meaning comprehension, main idea comprehension, word integration, logical understanding, and word segmentation (Feng & Chen, 2022).

The utilization stage corresponds to the phase during which listeners apply mental representations of sentence meaning, which encompasses challenges primarily related to summarizing the main idea, comprehending key information, understanding the topic, discerning the purpose, integrating information, and distinguishing salient points.

1.3 Literature Review

In regard to previous research, the author found that a paucity of scholarly inquiries has been undertaken via case study methodology in the realm of both domestic and overseas academic investigations, with the exception exemplified by the work of Juan and Abidin (2013). Predominantly

acknowledged as a formidable impediment encountered by a substantial cohort of learners, listening difficulties at the perceptual phase have been duly acknowledged (Lau, 2017; Namaziandost et al., 2019; Feng & Chen, 2022). The realm of perceptual hindrances encompasses an array of six distinct typologies, encompassing processing of connectives, phonological confounding, recognition of familiar lexemes, word identification, accentual intricacies, and phonological nuances, with the distribution of each hurdle displaying a varying proportionality (Feng & Chen, 2022). Perceptual difficulties take the highest proportion of listening comprehension difficulties, and there are several sub-indicators within it, the proportion and changing development of these sub-disorders are also worth exploring in order to show a clear developmental path.

Based on language comprehension theory proposed by Anderson (2000, 2015), this study adopts a longitudinal tracking method to investigate the developmental trends of Chinese EFL learners' Listening Perceptual Difficulties (LPD).

2. Method

2.1 Research Questions

This study investigates longitudinal case variability based on quantitative & qualitative data of EFL sophomores' LPDs, and the data are collected from five TEM-4 dictation tasks over a semester. Therefore, two research questions will be addressed: (1) How does EFL learners' LPD develop at individual level? (2) What are the factors that contribute to individual trajectories?

2.2 Participants

The study comprises a sample of 78 sophomores majoring in English at a university, consisting of 5 male and 73 female participants. The age range of the participants falls between 17 and 20 years. Their English learning duration exceeds 10 years, and none of them has had prior experience studying abroad before enrolling in university. At the conclusion of the third semester, the average score in the listening course is 75.81, with a standard deviation of 9.5. Moreover, two cases (YC and ZB) were selected according to the following criteria: 1) they have strong motivations; 2) they are willing to participate in the interview.

2.3 Listening Tasks

The dictation tasks for this study were drawn from the Test for English Majors Band 4 (TEM-4), covering subjects related to ordinary social interactions and educational scenarios. In order to ensure familiarity, the topics of these tasks were carefully aligned with the content covered in each unit of the designated course book. The five selected tasks encompassed subjects such as *tornadoes, the TOEFL examination, buying a used car, snowy weather,* and *engagement* in various contexts. Each task presents a concise text consisting of approximately 15 sentences, with each sentence containing 10 to 12 words.

2.4 Measurement of LPD Indicators

Drawing upon Liu (2002), this study has selected four indicators to gauge LPD. These indicators encompass a) vocabulary complexities, b) familiar lexical items, c) instances of weak phonetic

realization, and d) the perceptual processing of lexical chunks. Vocabulary difficulties pertain to instances where listeners encounter uncommon or entirely unfamiliar words. Familiar word difficulties emerge when listeners, while proficient in the vocabulary, struggle with proper written reproduction, resulting in errors such as “clouds” being transcribed as “class” and “mainly” as “many”. Weak form difficulties encompass function words, such as prepositions, articles, pronouns, conjunctions, past tense “-ed”, and singular and plural “-s”, which listeners may either misidentify or misinterpret. Chunk difficulties center on misapprehensions of multi-word combinations, encompassing cliticization, resyllabification, addition (r-linking), deletion, assimilation, and enthesis (n-insertion). Illustratively, instances include perceiving “grow in” as “growing” or “grow around” as “ground”.

2.5 Data Analysis

To capture inter-individual variability, the present study employed an altitude lines graph (Van Geert & Van Dijk, 2002). It involves the identification of a specific indicator, the computation of percentiles at 25%, 50%, and 75% within a learner cohort for said indicator, subsequent construction of a line graph to depict these percentiles, and the overlay of individual learners’ developmental trajectories to elucidate their relative progress relative to the collective cohort. To illustrate intra-individual variability, this study employed a Z-score transformation on the raw data, adhering to Wang et al. (2015). Consequently, a comparative analysis of the four EFL learners across the four subsystems---vocabulary difficulties, familiar word difficulties, weak form difficulties, and chunk difficulties---was facilitated.

3. Result

3.1 Inter-Individual Variability

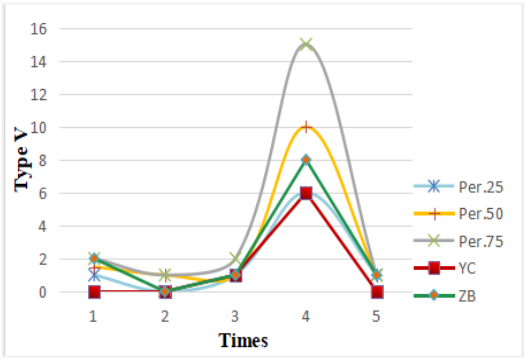

Figure 1. Altitude Line Graph of Type V

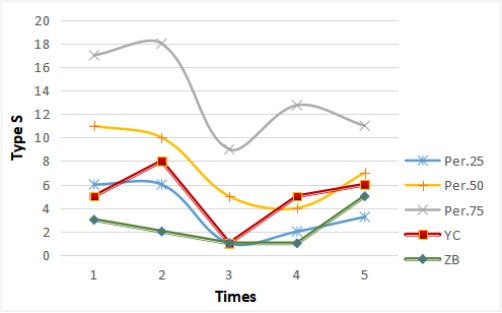

Figure 2. Altitude Line Graph of Type S

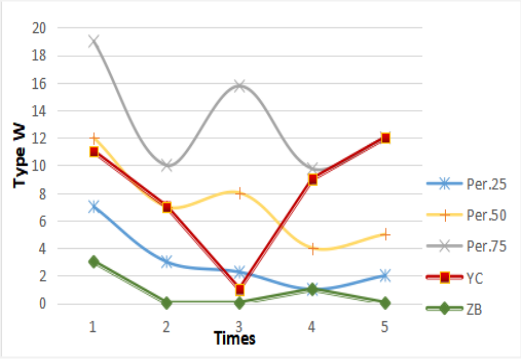

Figure 3. Altitude Line Graph of Type W

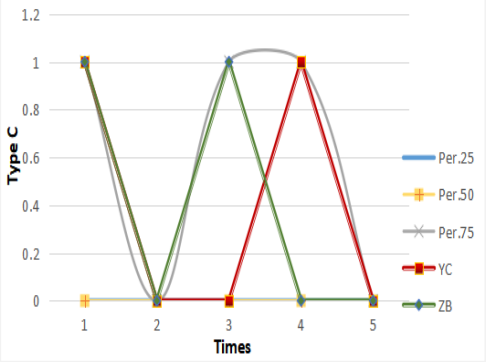

Figure 4. Altitude Line Graph of Type C

The incidence rates of lexical challenges and instances of weak phonemic realization exhibited a gradual reduction within the entire cohort (depicted in Figures 2 and 3). However, it is noteworthy that YC and ZB exhibited conspicuous deviations from the aggregate trend, displaying pronounced leaps in their respective progress trajectories. These deviations, characterized by inter-individual variations, underscore the imperative of delving into individual cases to comprehend their distinctive dynamics.

Among the array of listening perceptual difficulties delineated in this investigation, challenges pertaining to lexical chunking manifested comparatively infrequently when contrasted against the prevalence of the other three categories of difficulties.

In the case of YC, the frequency of lexical chunking difficulties aligned closely with the 25th percentile demarcation of class-based metrics across the spectrum of five dictated exercises. Conversely, ZB's trajectory consistently fell between the 25th and 50th percentile benchmarks of the class distribution. This observation implies that YC contended with a diminished frequency of lexical hindrances compared to their peers and managed to sustain this distinctive pattern over time (see Figure 1).

YC exhibited a discernible trend characterized by a gradual escalation in the frequency of encountered familiar word difficulties, advancing from the 25th percentile of class values to the 50th percentile. This temporal evolution suggested a propensity for YC to incrementally augment her cognitive load associated with familiar word difficulties relative to the broader class cohort. Conversely, the trajectory traced by ZB demonstrated a comparable inclination, with a progressive ascent observed from the 25th percentile to an approximation of the 50th percentile. Notably, a transient decline was registered during the fourth time interval. This transient deviation signified an instance where ZB experienced a temporary decrement in his adeptness in handling familiar word difficulties, thereby deviating from the prevailing trend within the class cohort (see Figure 2).

YC's trajectory concerning weak form difficulties exhibited a distinctive "V"-shaped pattern of variation. During the initial two assessments, YC's performance closely approximated the 50th percentile threshold of the class's metric distribution. In contrast, the subsequent evaluation saw her position shift towards the 25th percentile demarcation, signifying a comparatively diminished encounter with weak form difficulties relative to her peers. However, the ensuing two instances positioned YC's performance adjacent to the 75th percentile boundary, indicating a diminished capacity for surmounting weak form challenges in comparison to the broader class cohort during these periods. Conversely, ZB's trajectory exhibited a more consistent pattern, persistently aligning with the 25th percentile of the class-based metric distribution (see Figure 3).

Regarding chunk difficulties, both YC and ZB initially positioned their performance close to the 75th percentile benchmark within the class distribution. Subsequent evaluations, however, evidenced a convergence of their trajectories to the 25th percentile threshold across the subsequent three assessments. This convergence signified a demonstrable developmental progression in their respective capacities to effectively navigate and surmount challenges associated with chunking difficulties (see Figure 4).

3.2 Intra-Individual Variability

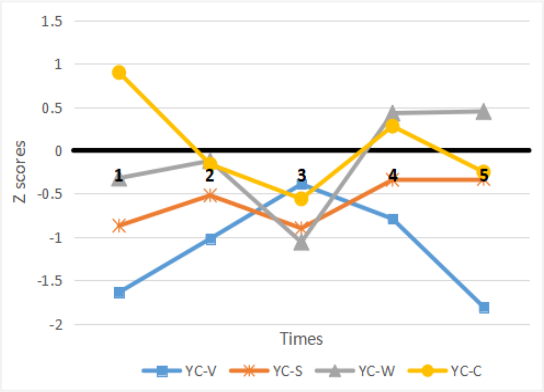

Figure 5. Z-Scores of YC's LPD Indicators

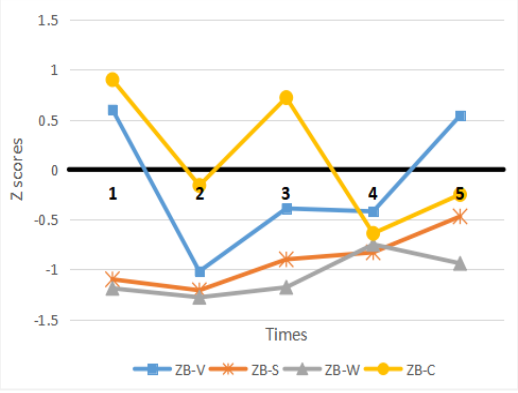

Figure 6. Z-Scores of ZB's LPD Indicators

As depicted in Figure 5, the developmental trajectory of the YC exhibited intricate and nonlinear attributes across four distinct subsystems, namely, vocabulary challenges, familiar word complexities, weak form intricacies, and chunk-related difficulties. Notably, the trajectory of familiar word challenges closely mirrored that of weak word complexities, displaying a subtle yet discernible fluctuating upward pattern. This pattern signified a symbiotic relationship, wherein these two facets shared mutual growth points, reinforcing each other's developmental progression. Conversely, a competitive dynamic was observed between vocabulary challenges and chunk-related difficulties during the initial three dictation tasks. This observation illustrated a scenario wherein the ascent of one facet coincides with oscillations and declines in the other, indicating an antagonistic developmental interplay. However, the subsequent two dictation tasks witnessed a supportive interrelation between these two aspects. This shift in dynamics was indicative of their concurrent descent, albeit to varying degrees.

As depicted in Figure 6, ZB displayed fluctuating dynamics imbued with non-linear attributes across its

developmental continuum encompassing four distinct subsystems. Broadly, the indicators elucidated a discernible pattern of "supportive-competitive" interplay. In the initial two dictation tasks, the developmental trajectories of the four indicators remained concordant, albeit manifesting varying degrees of a "downward-ascending" pattern. Subsequently, in the fourth task, a notable departure was observed wherein, aside from the chunk-related difficulties, the remaining three indicators exhibited an ascending trajectory. Analogously, in the fifth task, a similar deviation emerged, with the exception of the weak form difficulties, wherein the other three indicators displayed an upward trend.

3.3 Interview

After conducting interviews with the two participants, the researcher discerned that the divergent trajectories in the development of the four facets encompassing learners' listening perceptual difficulties were shaped by a multitude of determinants. The subjects, identified as YC and ZB, expounded upon their experiences as follows:

(1a) ... the assessment landscape during high school did not incorporate evaluations of listening skills, leading to my relatively diminished focus on this aspect. The acquisition of accurate phonological renditions was notably impeded by my local linguistic influences and local dialect adopted by instructors (YC).

(1b) The General Certificate of Secondary Education (GCSE) did not encompass a testing component for English listening comprehension. Consequently, opportunities for honing this skill remained scant. Even if we read the words wrongly or couldn't read them, it wouldn't have any effect on the exam and solving the questions, and if we could understand the exam, we could basically write it correctly (ZB).

Both participants concurred on the pivotal role of the regional language policy in determining the efficacy of their acquisition of English listening comprehension. Moreover, YC underscored the salience of instructors' phonetic enunciation, positing that the acoustic attributes of instructors' speech within the learning milieu wielded substantial influence over learners' linguistic input and interactions underpinned by negotiated meanings (Dai, 2013). The insights derived from ZB's interview implied that monolingual linguistic settings exerted a certain degree of influence on the quantum of learners' exposure to the target language, their engagement in second-language practice, and their capacity to generate linguistic output.

(2a) I often employ an approach that involves making a notes of the word's approximate phonetic symbols, inferring meanings from context, and swiftly omitting challenging words (YC).

(2b)... If I feel that it is hard to make up, just give it up or I will miss more listening materials (ZB).

In relation to overcoming vocabulary difficulties, YC's method of utilizing inference techniques rooted in meaning and form contributes to his generally minimal lexical impediments. This cognitive strategy appears to mitigate auditory comprehension challenges. Yet, YC encountered a transient surge in difficulties during the fourth task, possibly due to cognitive load resulting from heightened vocabulary demands. Conversely, ZB's tendency to avoid unfamiliar words resulted in a greater frequency of vocabulary-related obstacles across five dictation tasks. Notably, both participants faced heightened

vocabulary hurdles during the fourth task, coinciding with increased task complexity.

(3a) It's hard to follow the flow of speed and judge the exact pronunciation; I can hear the general meaning but could not write it, especially if the sentence contains proverbs or even used a complex sentence pattern...the state and mood also had some influence (YC).

(3b) The biggest problem is the subconscious confusion of words, for example, I often hear three as six, and the beginning of these two words are pronounced similarly, plus time is short. If there is a second time to check the listening material, the correct word can be checked, but if not, I can't find it (ZB).

In relation to challenges pertaining to familiar words, YC underscored the influence of her emotional disposition and mental state during dictation tasks on her academic performance. Notably, YC elaborated on an instance of subpar performance in the college entrance examination, attributing it to her psychological state at the time. This prompts a speculative inference regarding the potential causative nexus between language anxiety and academic achievement. YC's approach to comprehending and addressing sentence structures during dictation tasks occasionally led to cognitive bottlenecks in the serial processing model. Contrarily, ZB exhibited a more structured analysis of difficulties related to familiar word usage. In the interview, ZB outlined three distinct categories of issues encountered with familiar words, reflecting a heightened self-awareness of his linguistic shortcomings. Given the typically unrestricted nature of the dictation task, ZB harnessed the opportunity for timely rectification of misspelled familiar words through subsequent retelling, a practice contributing to his persistent placement around the 25th percentile within the class distribution of familiar word-related issues. Meanwhile, ZB exhibited a concentration on word extraction, thus circumventing any impediments to the cohort model.

(4a) I often do listening tasks in a way that is divided by syllables rather than standing on the whole picture and according to clusters of meaning; The weak forms are less important words, some of which are not audible, but predictable (YC).

(4b) "a" and "the" are really my enemies! And the other conjunctions 'of' and 'and' are often overlooked because they were produced sticky and then they are quicker. One day, I went to some listening tips on the internet, and slowly I mastered some skills. (ZB)

Regarding difficulties associated with weak forms and chunks, YC employed predictive strategies while consciously attending to semantic clusters. Nonetheless, her susceptibility to chunk disorder had displayed a progressive escalation since the inception of the third dictation task. This observed trend aligned with the concurrent graphical representation denoted by the Z-scores, indicating a diminution in YC's vocabulary and chunk difficulties. This phenomenon was attributable to YC's limited cognitive capacity, which impeded comprehensive management of all four indicators. ZB's performance manifested a mounting trajectory across three parameters: familiar word, raw word, and weak form difficulties, extending from the second to the fourth dictation task. This temporal span followed by ZB's deviation from an existing attractor state through the pursuit of external listening comprehension techniques accessed via the Internet. Therefore, during the fifth dictation task, a reversal was discerned

in one of the indicators, specifically raw word barriers, characterized by a descending trend. Consequently, this indicator had transitioned from a mutually reinforcing stance to one marked by competitive interplay with the remaining three evaluative indices.

4. Discussion

To address the first research question, this study utilized the framework of dynamic system theory and adopted a longitudinal case study approach. It explored distinctive trajectories in the listening perceptual difficulties of the two learners, diverging from the trends observed within the class cohort. Moreover, both learners exhibited idiosyncratic patterns across the four indicators of listening perceptual difficulties. Within this context, YC's progression in familiar word difficulties manifested a modest, oscillating upward trajectory coalescing with weak form difficulties, implying a reciprocal reinforcing relationship with shared growth dynamics. In the initial three dictation tasks, vocabulary obstacles and word block impediments exhibited a competitive relationship, with one ascending while the other diminished; however, in the subsequent two tasks, their interplay shifted to a mutually supportive alignment, resulting in varying degrees of decline. Conversely, ZB's profile illustrated a pattern of "support-competition" among the indicators. During the initial two dictation tasks, the trends across all four indicators mirrored each other, showcasing varied degrees of a "downward-ascending" trajectory. In the fourth task, barring word block disorder, the remaining three indicators demonstrated an ascending trend; similarly, in the fifth task, apart from weak word disorder, the other three indicators displayed an ascending trajectory.

To address the second research question, interviews were employed. It is evident that the linguistic development of individual learners was intricately intertwined with a confluence of factors including the environment, linguistic context, and individual idiosyncrasies. In the instances of both YC and ZB, their learning trajectories were notably influenced by local language policies and the absence of English listening assessments in the college entrance examination. YC, in particular, accentuated the significance of instructor phonetic delivery and the negative transfer of native language on the congruence between word pronunciation and meaning. In the sphere of language comprehension, YC gravitated towards utilizing inferential competencies to correlate semantic and morphological dimensions. However, her endeavor to employ a serial modeling approach for sentence comprehension was occasionally hampered by cognitive impediments. YC adeptly employed self-regulation techniques to facilitate her learning process. For vocabulary-related challenges, YC engaged in a reflective log where she transcribes unfamiliar terms for silent recitation, supplementing her effort with vocabulary garnered from the TEM-4 listening materials. Additionally, for the handling of weak forms and linguistic chunks, YC posited that the sense groups in listening comprehension do not perfectly align with those in the target language, necessitating a meticulous grasp of grammatical nuances for effective processing. Furthermore, her post-class activities encompassed reading materials such as 'Bookworm,' 'English World,' and 'English Street,' augmenting her exposure to the target language. It is of

noteworthy import that language anxiety, situated within the ambit of individual variability, emerged as a salient determinant with profound ramifications on YC's listening comprehension aptitude.

ZB's observations underscored the pertinence of negative transfer stemming from problem-oriented cognitive patterns and native linguistic attributes within a monolingual language milieu. This dynamic served to impact both the assimilation and generation of the target language, thereby influencing his language learning trajectory. During the process of listening comprehension, ZB gravitated towards employing cohort model to identify familiar lexical items, concurrently resorting to avoidance strategies when confronting unfamiliar terms. ZB's repertoire of self-regulation strategies exhibited a pronounced focus on the lexical domain and methodological inquiry. His approach involved reflective practices at the lexical stratum and a deliberate probing into the efficacy of his listening methodologies. Notably, he adopted a mnemonic approach by meticulously committing to memory words that were inaccurately apprehended, unfamiliar, or presented challenges in written transcription. Subsequently, he engaged in a recursive engagement with the audio material, revisiting sections where errors were committed, thus illustrating his proactive approach to rectification and enhancement in listening comprehension.

The evolution of both trajectories was influenced by a constellation of factors encompassing environmental considerations (language policy, linguistic milieu, learning environment, etc.), linguistic determinants (task complexity, language apprehension, negative transfer of native language, etc.), and individual differences (e.g., self-regulation strategies, language anxiety, etc.).

This study is expected to provide insights to listening teaching and learning from the following three aspects, namely, context, task and learners.

Within the realm of listening pedagogy, the cultivation of a linguistic milieu is pivotal. Educators should endeavor to replicate authentic linguistic scenarios to the fullest extent possible, thereby immersing learners in genuine contextual applications. This exposure enables a more nuanced comprehension of fluent articulation, coherent intonation, and prevalent spoken idioms. Additionally, the accentuation of intercultural instruction is indispensable, facilitating learners' acclimatization to distinct oral communication practices and cultural nuances across varying contexts.

Concerning the design of listening tasks, educators should conceive a spectrum of tasks that mirror real-life language application. Tasks spanning from rudimentary vocabulary identification to intricate main idea extraction engender incremental enhancement of learners' listening competencies. Concurrently, task complexity should be tailored to learners' proficiency levels and requisites, affording challenges conducive to fostering a constructive learning experience.

Recognizing individualized learner profiles is pivotal, with educators poised to acknowledge the cognitive and psychological variances that distinguish each learner. A judicious approach encompasses a focus on learners' listening processing strategies, self-directed learning propensities, and emotive influences, thereby facilitating bespoke pedagogical interventions and support.

However, it is prudent to acknowledge limitations inherent in this study. Subsequent research could

augment insights by expanding the number of interviews, thereby delving deeper into learners' process-oriented trajectories.

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