

The Impact of Ambiguity Tolerance on Second Language Acquisition and Its Implications for Classroom Teaching

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Abstract

As a key dimension of individual differences among learners, ambiguity tolerance significantly influences the process of second language acquisition and the effectiveness of classroom teaching. Based on relevant research findings at home and abroad, this paper systematically sorts out the core connotations and characteristics of this concept. Further, it delves into the internal mechanisms through which ambiguity tolerance affects language learning from the perspectives of specific language skills such as reading, writing, and listening. Combined with teaching practice, this paper proposes targeted teaching strategies. The study finds that learners with high ambiguity tolerance tend to actively adopt positive learning strategies and exhibit stronger adaptability in practical language application. In contrast, learners with low ambiguity tolerance are prone to interference from learning anxiety and uncertain factors. This research aims to provide educators with a systematic theoretical support and practical reference framework for identifying students' individual differences and optimizing teaching strategies.

Keywords

Ambiguity Tolerance; Second Language Acquisition; Classroom Teaching; Individual Differences; Learning Strategies

1. Introduction

In the field of second language acquisition research, individual differences among learners have always been an important topic in teaching exploration. Ambiguity tolerance (ToA), a key factor affecting individual differences among learners, can be traced back to Frenkel-Brunswik's (1949) research in the field of psychology, which is defined as an individual's psychological adjustment ability when facing situations of ambiguity, contradiction, or information deficiency. Subsequent scholars have deepened this concept. Norton (1975) emphasized that its essence is "the psychological tendency to transform ambiguous information into potential threats". Ellis

(1994) defined it as "the ability to resist submitting to authority or adhering to established classification frameworks when exposed to new language stimuli".

Empirical studies have continuously confirmed that the level of ambiguity tolerance has a direct impact on foreign language acquisition outcomes. Wen Qiufang (2010) systematically argued in the field of second language acquisition that ambiguity tolerance should be regarded as an important psychological factor and should be strengthened in foreign language learning. Focusing on Chinese English learners, the inherent complexity of English in terms of syntactic structure, vocabulary system, and phonetics leads to frequent ambiguity phenomena such as semantic ambiguity, grammatical polysemy, and phonetic liaison. Dai Manchun's (2000) research confirmed that learners' tolerance for such uncertainties directly affects their choice of learning strategies and learning outcomes.

Although previous studies have preliminarily revealed the positive correlation between ambiguity tolerance and language proficiency, further exploration is needed on how it affects specific language skills and what corresponding teaching strategies should be adopted. By integrating theoretical frontiers and teaching empiricism, this paper systematically analyzes the theoretical connotation of ambiguity tolerance and its impact on the learning process, and puts forward implications for classroom teaching. The purpose is to provide a new research perspective and practical reference for promoting the innovation of personalized foreign language teaching paradigms.

2. Core Connotation of Ambiguity Tolerance

2.1. Conceptual Definition and Theoretical Evolution

The definition of ambiguity tolerance varies with research perspectives. From a psychological perspective, Budner (1962) interpreted its essence as an individual's stable tendency to perceive ambiguous situations as potential threats. On this basis, Norton (1975) clearly defined it as the psychological acceptance degree of the subject when facing incomplete information structures, contradictory semantic representations, or ambiguous symbol systems. In the field of applied linguistics, Ellis (1994) emphasized that as a metacognitive trait, its core lies in accepting the existence of uncertainty rather than demanding absolute classification. In addition, Ely (1989) positioned it as a learning style of "bold guessing and active trying", which essentially reflects the cognitive tolerance threshold of learners for ambiguity phenomena in the process of second language acquisition.

2.2. Core Characteristics and Individual Differences

Learners with high ambiguity tolerance (High ToA) usually show a strong tendency of cognitive exploration. Their typical behavioral characteristics include actively inferring through context and maintaining a low level of anxiety in situations of lan-

guage uncertainty (Ellis, 1994). The core cognitive mechanism of such learners is to transform ambiguity into cognitive resources for meaning construction rather than obstacles. Specifically, when encountering new words in text reading, they are more inclined to continue reading rather than interrupt to check the dictionary. In the process of oral production, they give priority to ensuring the fluency of meaning transmission rather than rigidly adhering to the accuracy of grammatical forms.

On the contrary, learners with low ambiguity tolerance (Low ToA) pay excessive attention to ambiguous information. Norton's (1975) empirical observation found that such learners often suffer from cognitive load overload due to uncertainty, including the inertia of relying on dictionaries and the tendency to avoid complex language tasks. Therefore, individuals with low tolerance are prone to frustration due to phonetic liaison or accent differences in the process of listening comprehension, which in turn activates the "affective filter" mechanism described by Krashen (1985), thereby reducing the comprehensibility of language input.

3. The Impact of Ambiguity Tolerance on Language Learning

Ambiguity tolerance has a significant impact on various language skills of second language learners, which is specifically manifested as follows.

3.1. Impact of Ambiguity Tolerance on Reading

Reading is a skill field where ambiguity phenomena are concentrated. Learners with high ambiguity tolerance are more inclined to adopt overall understanding to deal with ambiguous vocabulary, complex syntax, or culturally-loaded texts. They make up for local semantic deficiencies by grasping the main idea and logical relationship of the text, and their reading speed and scores on inference questions are significantly better than those with low tolerance (Ely, 1989). However, low-tolerance learners may get stuck in understanding due to entanglement in word meanings.

Taking the reading of academic texts containing culturally-loaded words as an example, when facing the sentence involving cross-cultural concepts "Confucian ethics emphasize the cultivation of junzi through the practice of ren (benevolence)", learners with high ambiguity tolerance will, based on the overall discussion of Confucianism in the previous text, quickly establish the semantic mapping between "junzi" and "gentleman's personality", "ren" and "practice of benevolence" through the logical connection of core concepts such as "gentleman" and "benevolence". Even without fully mastering the precise corresponding relationship of terms, they can still maintain a coherent understanding of the core view that Confucian ethics cultivates gentlemen through the practice of benevolence through the text framework.

In contrast, low-tolerance learners may repeatedly check the dictionary or interrupt reading to verify terms because they are entangled in whether "junzi" should be translated as "gentleman", "nobleman", or "virtuous person", and whether the cate-

gory boundary of "ren" includes "fraternity" and other specific meanings, leading to multiple stagnations in the reading process, and even affecting the overall grasp of the paragraph's argumentative logic due to the uncertainty of local semantics. Wang Haiwei (2021) also pointed out that ambiguity tolerance is significantly positively correlated with English reading ability, especially in tasks such as inference questions that require contextual speculation, high-tolerance learners perform better.

3.2. Impact of Ambiguity Tolerance on Writing

In writing, students with different ambiguity tolerances will choose different writing strategies. High-tolerance students can skillfully use metacognitive strategies and actively try complex syntactic structures and advanced vocabulary (Oxford, 1993). On the contrary, low-tolerance students often pay excessive attention to the accuracy of language forms, which is manifested by a high frequency of dictionary consultation and repeated revision of the article, which directly leads to stagnation in the writing process and empty content.

For example, when facing semantically similar words, some low-tolerance learners will repeatedly interrupt the writing process and spend time checking the distribution frequency in the COCA corpus. Although the grammatical error rate of such students' compositions is relatively low, their articles usually have a pile-up of simple sentences and appear empty. On the contrary, high-tolerance learners can initially build the core framework according to the context, and then adjust the vocabulary.

3.3. Impact of Ambiguity Tolerance on Listening

Different from writing where articles can be revised multiple times, the immediacy and irreversibility of listening comprehension put forward higher requirements for learners' ambiguity tolerance. Ambiguity phenomena in listening are diverse, such as phonetic ambiguity caused by liaison and weak reading rules, and pronunciation differences caused by different accents.

Learners with high ambiguity tolerance are often able to accept the ambiguous state of some language information, infer the semantics by capturing key words and perceiving the prosodic features of intonation, and effectively reduce anxiety caused by the lack of detailed information. Such learners are good at constructing meanings from incomplete phonetic input, avoiding the impact of local understanding obstacles on the acquisition of overall information (Chapelle & Roberts, 1986).

However, learners with low ambiguity tolerance often get stuck in understanding due to difficulties in identifying individual words or phonetic forms, and even are unwilling to listen to the complete listening content. Taking the liaison phenomenon in spoken English as an example, when students encounter abbreviated forms, low-tolerance learners may be unfamiliar with such phonetic rules, excessively entangle in specific pronunciation forms, and ignore the subsequent key information.

This cognitive anxiety caused by low tolerance will further activate the "affective filter" mechanism in language learning (Krashen, 1985), leading to a significant decline in the processing efficiency of listening input information, forming a vicious circle.

4. Implications for Classroom English Teaching

4.1. Differentiated Teaching in Reading

Based on the impact of ambiguity tolerance on students' text processing, reading teaching should design schemes for students with different tolerances to promote the coordinated improvement of the depth and efficiency of their language understanding.

4.1.1. Teaching Strategies for Students with Low Ambiguity Tolerance

Students with low ambiguity tolerance usually pay excessive attention to the accuracy of local language, so our teaching intervention should focus on breaking the vicious circle where students get stuck in word meaning entanglement and understanding stagnation, and gradually cultivate their ability of overall understanding. For example, time-limited reasoning training can be implemented. Select academic paragraphs containing culturally-loaded words or metaphorical expressions, and require students to complete the summary of the main idea and the sorting out of the paragraph logic chain within a specified time without using a dictionary. Teachers can focus on marking key words that support the core view to promote students to focus on the text framework.

4.1.2. Teaching Strategies for Students with High Ambiguity Tolerance

Students with high ambiguity tolerance may sometimes ignore language details due to over-reliance on the overall understanding strategy, leading to semantic ambiguity in expression. Therefore, in teaching, on the basis of retaining their advantage in overall understanding, it is necessary to increase exercises on the accuracy of language. For example, ambiguity sentence analysis tasks can be introduced. Select ambiguous texts in various professional fields, require students to mark potential ambiguity points from the three levels of semantics, syntax, and pragmatics, and combine the context to limit the best interpretation. Through analyzing ambiguity points, implicit ambiguity tolerance can be transformed into explicit accuracy judgment.

4.2. Hierarchical Guided Teaching in Writing

Based on the differences in writing strategies caused by ambiguity tolerance, teachers need to design tasks that balance fluency and accuracy according to the cognitive characteristics of different students, aiming to promote the coordinated develop-

ment of content construction and language use in the writing process of students.

4.2.1. Teaching Strategies for Students with Low Ambiguity Tolerance

This group of students often affects the writing process due to excessive entanglement in language forms. Therefore, the core of teaching is to emphasize writing with meaning expression as the priority. First of all, teachers should create a relaxed language environment for students in the first draft stage, requiring them to brainstorm within a limited time and quickly record core viewpoints in the form of an outline. At this stage, the focus is on ensuring the coherence of expression, so teachers should allow students to use simple sentences and not correct grammatical problems temporarily. Secondly, after the content framework is basically formed, language use guidance is provided in the revision stage to give priority to solving key problems that affect meaning transmission, such as tense consistency and the accuracy of core vocabulary. This phased task design can not only help students overcome excessive anxiety about language forms but also gradually improve language accuracy on the basis of content construction.

In addition, the teacher evaluation mechanism can reduce students' anxiety through error classification. Teachers can divide language problems into meaning-construction errors such as subject-verb inconsistency and non-core errors such as missing articles and spelling mistakes. In the initial stage, only specific revision suggestions are provided for the former, and minor errors are prompted but not correct. This evaluation mechanism can improve low-tolerance students' attention to writing fluency.

4.2.2. Teaching Strategies for Students with High Ambiguity Tolerance

Excessive tolerance of students with high ambiguity tolerance may lead to semantic ambiguity, so teaching needs to enhance exercises on the accuracy of language forms on the basis of maintaining the advantage of content coherence. For example, use a writing portfolio to record students' writing thinking. When students use complex sentence patterns or advanced vocabulary, they need to mark the selection basis synchronously and reflect on whether the expression is accurate in the revision stage.

4.3. Multi-dimensional Intervention Teaching in Listening

Considering the immediacy of listening comprehension, teaching intervention needs to construct a systematic listening comprehension improvement plan according to the information processing ability of different tolerance groups. This plan needs to take into account the cognitive characteristics of different learners for hierarchical task design.

4.3.1. Teaching Strategies for Students with Low Ambiguity Tolerance

Such students are highly sensitive to the uncertainty of phonetic forms, so teachers need to gradually enhance their tolerance for phonetic ambiguity in teaching. First, teachers can build a scaffold for phonetic analysis. Initially, select standardized listening materials with slow speed and no liaison, and provide text comparison with marked phonetic phenomena such as liaison and weak reading rules, guiding students to establish the correspondence between phonetics and semantics through listening, watching, and following. Secondly, when introducing materials with natural speed, teachers can split a long sentence into several sense groups. For example, use audio editing tools to set interval pauses or allow students to pause between sentences by playing in segments, which can well reduce the pressure of students' immediate information processing. It should also be noted that listening tasks need to follow the logic from easy to difficult. In the first listening, teachers can assign some main idea questions, and in the second listening, deal with detailed information. This step-by-step strategy can effectively prevent students from falling into overall understanding obstacles due to local phonetic ambiguity.

4.3.2. Teaching Strategies for Students with High Ambiguity Tolerance

In view of the cognitive advantages of this group, the focus of classroom teaching should be on preventing students from losing detailed information due to over-reliance on overall understanding. First, phonetic discrimination training can be carried out, introducing diversified listening materials (such as British, American, Australian accents, etc.), requiring students to analyze the impact of stress position and intonation changes on semantics. This kind of training can prevent students from stopping analysis and missing details because they understand key words. Second, in-depth semantic inference training can be implemented. Embed gap-filling tasks in natural speed materials, requiring students to deduce missing information through contextual logic. Such training can promote high-tolerance students' sensitivity to implicit semantics and grammatical details.

Through the above methods, we can not only give play to the advantage of overall understanding of high-tolerance students but also make up for their potential deficiencies in detail processing, so as to achieve the balanced development of listening skills.

4.4. Construction of Dynamic Evaluation System

To test the actual effect of teaching strategies, teachers can integrate process evaluation and summative evaluation, and track students' ability development through multi-dimensional observation. Taking reading teaching as an example, the evaluation can be carried out as follows.

First, in process evaluation, eye-tracking technology can be used to record two types of key data. For students with low ambiguity tolerance, focus on observing the number of times they repeatedly look back at the text due to entanglement in local

semantics. For students with high ambiguity tolerance, focus on their at ambiguous sentences. Such data can intuitively reflect the adjustment of students' reading strategies, for example, whether low-tolerance students reduce excessive entanglement in word semantics, and whether high-tolerance students enhance in-depth processing of complex sentence patterns.

Second, in summative evaluation, teachers can evaluate the effect through designing scientific reading tests, and specifically observe by comparing the difference between students' scores on inference questions and detail questions. The scores of inference questions reflect students' understanding of the overall semantics, while the scores of detail questions reflect students' understanding of local information. The difference between the two can effectively present the balanced development of students' reading ability.

Through the organic connection of hierarchical intervention and dynamic evaluation, teaching practice can, on the one hand, help low-tolerance learners avoid word-for-word reading and construct overall reading strategies; on the other hand, guide high-tolerance learners to strengthen their understanding of grammatical details and implicit information on the basis of quickly understanding semantics.

5. Conclusion

As an important factor in second language acquisition, ambiguity tolerance profoundly affects learners. We need to recognize the teaching value of "moderate tolerance", avoiding low-tolerance learners from excessive pursuit of accuracy and high-tolerance learners from ignoring details. Future research can further explore the interaction between ambiguity tolerance and other individual factors, as well as intervention strategies in the digital teaching environment, so as to provide more targeted solutions for precise foreign language teaching.

Ambiguity tolerance is subtly affecting learners' choice of cognitive strategies and language output performance. This requires teachers to deeply recognize the importance of "moderate tolerance", prevent low-tolerance learners from falling into understanding stagnation due to excessive pursuit of the accuracy of language forms, and also prevent high-tolerance learners from leading to wrong expressions due to ignoring detail control.

Future research can deeply investigate the interaction between ambiguity tolerance and other individual factors such as motivation or anxiety. It can also pay attention to the impact of digitalization on teaching strategies, such as how to use AI to design and adjust interactive tasks. It is believed that these studies will provide more abundant theoretical support and practical paths for foreign language teaching.

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