

Elementary School Pupils' English Speaking and Listening Learning: A Non-Participatory Observation Study Based on Piaget's Cognitive Development Theory

Xiwen Huang¹, Jie Yang²

¹University International College, Macau University of Macao, China

²Asia-Europe Institute, University Malaya

ABSTRACT

This non-participatory observation study delves into the English speaking and listening learning behaviors of elementary school pupils, drawing upon Piaget's Cognitive Development Theory as the theoretical framework. Through systematic and unbiased observation in natural classroom settings, the research aims to uncover the nuances of how young learners engage with English language acquisition. The study meticulously documents the interactions between pupils and their linguistic environment, examining the influence of cognitive developmental stages on their speaking and listening skills. By analyzing the observed data, the research seeks to identify patterns and strategies that can enhance the teaching and learning of English in early education. The findings are expected to contribute valuable insights to educators and curriculum designers, offering evidence-based recommendations for fostering effective English language learning among elementary school pupils.

KEYWORDS

Elementary School Pupils; English Speaking and Listening Learning; Non-Participatory Observation; Piaget's Cognitive Development Theory; Language Acquisition; Early Education

1 Introduction

The acquisition of English language skills, particularly in the realms of speaking and listening, is of paramount importance in contemporary educational settings, especially during the formative years of elementary school. As the global landscape increasingly demands proficiency in English for communication and academic purposes, it becomes imperative to explore and understand the mechanisms through which young learners develop these crucial linguistic abilities. In this context, the present study embarks on an in-depth investigation of elementary school pupils' English speaking and listening learning behaviors, employing a non-participatory observation approach grounded in Piaget's Cognitive Development Theory.

Piaget's Cognitive Development Theory has long been recognized as a seminal framework for understanding the intellectual growth of children. It posits that cognitive development occurs in a series of distinct stages, each characterized by unique patterns of thought and learning capabilities. By applying this theory to the study of English language learning, we aim to elucidate the interplay between cognitive maturation and linguistic proficiency among elementary school pupils. This theoretical lens allows us to examine how the natural progression of cognitive abilities influences the pupils' capacity to comprehend, produce, and interact with spoken English.

Moreover, the choice of non-participatory observation as the research methodology is pivotal in capturing an authentic and unbiased portrayal of the learning process. Unlike participatory methods that may introduce observer bias or alter the natural dynamics of the classroom, non-participatory observation enables the researcher to observe and record the pupils' behaviors, interactions, and responses to English language stimuli in their truest form. This approach provides a rich and unadulterated dataset, which can be meticulously analyzed to uncover the underlying patterns and strategies employed by the pupils in their quest to master English speaking and listening skills.

The significance of this study lies in its potential to bridge the gap between theoretical constructs and practical pedagogical applications. By shedding light on the cognitive underpinnings of English language learning in elementary school settings, the findings can inform the development of more effective teaching methodologies and curricula. Furthermore, the insights gained from this research may assist educators in tailoring their instructional approaches to better align with the cognitive and linguistic needs of their pupils, thereby fostering a more conducive learning environment for English language acquisition.

2 Literature Review

2.1 Jean Piaget's Theory of Cognitive Development

Jean Piaget's theory of cognitive development offers valuable insights for English language teaching, particularly in

understanding how children acquire and process new information. Piaget's focus on the development of thought processes rather than merely assigning abilities to age levels emphasizes the importance of internalized structures and mechanisms that enable problem-solving and understanding, which can be directly applied to language learning contexts (Sandler & Sandler, 2008). His theory underscores the significance of stages in cognitive development, such as the concrete operational and formal operational stages, which are crucial for language teachers to consider when designing curriculum and instructional strategies (Cerovac & Keane, 2024). The application of Piagetian principles in education, as discussed by S. C. Clark, highlights the value of understanding these developmental stages to tailor teaching methods that align with students' cognitive abilities (Clark, 1995). Furthermore, integrating Piaget's theory with psycholinguistic approaches, as demonstrated by Dolores R. Tadlock, can enhance reading instruction by aligning teaching methods with the natural cognitive development of learners (Tadlock, 1986). The emphasis on conceptual development and instruction, as explored by Klausmeier and Hooper, suggests that Piaget's theory can inform the design of curriculum materials and instructional strategies, making them more effective by considering the cognitive development stages of learners (Klausmeier & Hooper, 1974). Additionally, Piaget's influence on the types of tasks studied in cognitive development research, such as problem-solving and reasoning, can inform language teaching by encouraging activities that promote high-level cognitive engagement (Siegler & Ellis, 1996). Despite criticisms of Piaget's stage theory, as discussed by Winstanley and others, the core principles of his theory remain relevant and can be adapted to address variability in learners' cognitive development, thus supporting a more nuanced approach to language instruction (Winstanley, 2022) (Lourenço & Machado, 1996). Overall, Piaget's theory provides a robust framework for understanding the cognitive processes involved in language learning, enabling educators to create more effective and developmentally appropriate teaching strategies.

2.2 Factors influencing English Listening and Speaking Ability

The ability to listen and speak in English is influenced by a multitude of factors, as evidenced by various studies. School type and parental educational background significantly impact English speaking proficiency among Chinese college students, with those from provincial and municipal key high schools and with higher paternal educational backgrounds showing better outcomes. Gender also plays a role, with female students generally outperforming males, and proficiency peaks around the age of 22.5 years (Pei & Pamintuan, 2024). Active listening is crucial for interactional competence in L2 communication, yet it is often overlooked in assessments like TOEFL and BEC, which focus more on grammar and vocabulary. Incorporating active listening into these assessments could provide a more holistic evaluation of a learner's abilities (Gao & Wang, 2024).

Big data technology has been used to enhance English listening and speaking skills by analyzing and improving students' motivation and enthusiasm, leading to better performance in these areas ("Analysis of the improvement path of English listening and speaking ability based on big data technology", 2023). In classroom settings, factors such as talker characteristics, acoustical environment, and listener characteristics, including cognitive development and language exposure, are critical for effective speech communication (Soli & Sullivan, 1997). Proficiency levels also mediate the intelligibility of different English accents, affecting comprehension and transcription abilities, which suggests that higher proficiency can mitigate the challenges posed by non-native accents (Kang et al., 2020). Furthermore, fluency, intelligibility, and acceptability of non-native speech are interconnected, with speaking rate and pause duration being significant predictors of perceived speech quality (Lin & Francis, 2014). The human capital model and intergroup relations theory highlight that individual factors, such as linguistic heterogeneity and inequality, alongside structural factors like group size and segregation, influence English proficiency among immigrants (Hwang & Xi, 2008). Lastly, the home language area and its interaction with sex significantly affect English proficiency, with certain groups requiring more remedial attention (Davies, 1967). Collectively, these studies underscore the complex interplay of educational, cognitive, environmental, and sociocultural factors in shaping English listening and speaking abilities.

2.3 New Curriculum Standard

The new curriculum standard for teaching English in China's compulsory education system reflects a complex interplay of global influences, national policies, and local challenges. The National English Curriculum (NEC) in China has been influenced by the Global Englishes (GE) paradigm, which advocates for a more inclusive approach to English language teaching that moves beyond native speaker norms to embrace diverse phonologies and cultural contexts (Liu & Fang, 2021). However, the implementation of these curriculum reforms has faced significant challenges. Teachers often encounter an "implementation gap" due to contextual constraints such as examination pressures, teacher resistance, and inconsistencies between policy and practice (Yan & He, 2012) (Yan, 2015). The historical evolution of the English curriculum in China has been marked by shifts in political and educational priorities, reflecting broader socio-political changes since 1949 (Adamson & Morris, 1997) (Wang & Lam, 2009). Despite the push for a communicative and task-based

approach in the new curriculum, there is ongoing debate about the suitability of these Western pedagogical models in the Chinese context, which is deeply rooted in Confucian educational traditions(Liu, 2016). The curriculum also faces challenges from the entrenched examination culture, particularly the Gaokao, which significantly influences teaching practices and assessment methods(Bai & Zhou, 2024) (Yan, 2015). Efforts to develop a national framework, such as the China Standards of English (CSE), aim to address these challenges by providing a more coherent and transparent structure for English language education across different educational stages(Jin et al., 2017). However, the success of these reforms depends on overcoming both macropolitical and micropolitical challenges, including resistance from educators and the need for professional development to align teaching practices with new curriculum standards(Jin et al., 2017) (Fang & Garland, 2014). Overall, while the new curriculum standards aim to modernize English education in China, their effective implementation requires addressing systemic issues and fostering a supportive environment for teachers and students alike.

3 Research Question

Piaget's theory, which posits that children's cognitive development occurs in distinct stages, provides a framework for understanding how young learners engage with English language acquisition. However, the literature review highlights a gap in the application of Piaget's theory to the specific context of English speaking and listening skills in elementary education. While Piaget's stages of cognitive development have been widely recognized and studied, their direct implications for teaching English as a second language, especially in the early years, remain unexplored. Based on the above phenomenon, the following is the research question:

How do the cognitive developmental stages, as described by Piaget's Cognitive Development Theory, influence the English speaking and listening learning behaviors of elementary school pupils in natural classroom settings, and what patterns and strategies can be identified through non-participatory observation to enhance the teaching and learning of English in early education?

4 Research Method

The present study employs a non-participatory observation approach to investigate the influence of Piaget's Cognitive Development Theory on the English speaking and listening learning behaviors of elementary school pupils. This method is chosen for its ability to capture authentic and unbiased data in natural classroom settings, thereby providing a rich dataset for analysis. The researcher will observe the pupils' interactions with English language stimuli, their responses to teaching methods, and their peer-to-peer communication without actively participating in the classroom activities. This approach allows for the collection of data that reflects the pupils' natural behaviors and learning processes, which is crucial for understanding the cognitive underpinnings of language acquisition.

The study will be conducted in one elementary school classroom, with the researcher observing pupils during English lessons. The observations will be systematic and structured, with a clear set of guidelines and categories for recording behavior. The researcher will document the pupils' speaking and listening activities, their engagement with the material, and their interactions with peers and teachers. This structured approach ensures that the data collected is consistent and reliable, facilitating a thorough analysis of the observed behaviors.

The study will adhere to ethical guidelines, ensuring that the pupils' privacy and consent are respected. The researcher will maintain a professional distance and will not interfere with the classroom dynamics. The findings from this non-participatory observation study are expected to provide valuable insights into how Piaget's Cognitive Development Theory can be applied to enhance English speaking and listening skills in early education.

5 A Case Study of Learners

5.1 Learner Profiles

5.1.1 Level, Nationality, and Mother Tongue

The subjects of this study are pre-intermediate level elementary school pupils in China, where English is a mandatory subject throughout the nine years of compulsory education. Despite the curriculum's emphasis on English, the educational system often prioritizes exam preparation, leading to a focus on vocabulary acquisition, grammar rules, and textbook-based reading exercises. Consequently, these pupils may not receive adequate training in oral communication skills, which is a critical area for development in the context of this study.

5.1.2 Motivation for Learning English and Perceived Needs

The motivation for learning English among the pupils varies. Some, such as Tony and Serhii, exhibit extrinsic motivation, driven by the practical necessity to communicate with foreign colleagues. Others, like Julia, are intrinsically motivated, with a desire to explore the cultures of English-speaking countries and engage in conversations during travel. Given these motivations, it is evident that enhancing listening and speaking skills is paramount for these pupils to achieve effective communication.

5.1.3 Preferred Learning Styles and Beneficial Classroom Activities

In the Chinese educational context, where exam-oriented teaching predominates, pupils have limited opportunities for communicative language use. As a result, they have developed a preference for learning through contextual and communicative approaches. They particularly enjoy pair work, group work, and activities that focus on speaking and listening. Additionally, these pupils find visual aids, such as pictures and screen displays, beneficial for learning and retaining English vocabulary. For instance, Tony and Serhii, who are visual learners, rely on written information to comprehend instructions, while Julia, an extroverted learner, thrives in environments where she can share her ideas with peers.

5.2 Results of Classroom Observation

5.2.1 Grammar

During the observation, it was noted that the pupils generally use articles correctly, as evidenced by sentences like "This is the book that I bought last month." However, difficulties were observed in the correct usage of "-ed" and "-ing" participles. For example, the sentence "The movie is so interested" reflects a common error. This issue aligns with the findings of Swan and Smith (2001), who state that "It is particularly difficult for Chinese learners to differentiate between the use of a present participle and a past participle" (p. 316).

5.2.2 Lexis

The pupils struggled with the correct usage of phrasal and prepositional verbs. Instances such as "I look up my father" instead of "look up to" were common. Swan and Smith (2001) attribute this difficulty to the absence of direct equivalents in Chinese, making these verbs challenging to master (p. 321).

5.2.3 Pronunciation

While the pupils did not exhibit issues with individual sounds, they faced challenges with connected speech in sentences. Examples include difficulties with linking sounds such as /w/ in "I can't do it," /r/ in "for an hour," and /j/ in "I agree." Swan and Smith (2001) suggest that the monosyllabic nature of Chinese influences learners to separate English words rather than blending them into a smooth 'stream of speech' (p. 313).

5.2.4 Reading Skills

Most pupils demonstrated proficiency in reading for detailed information, a skill emphasized in Chinese English education. However, reading for the main idea was more challenging, as they tended to read sentences linearly and struggled to grasp the overall passage meaning. Tony, despite being a visual learner, also faced difficulties in identifying the main idea in a short travel-related passage provided by the instructor.

5.2.5 Listening Skills

Listening for specific information, such as numbers, was found to be particularly difficult for the pupils. For example, recalling numbers associated with words like 'bill' and 'million' was not immediate. Tony, identified as a visual learner, also showed weaknesses in this area, failing to accurately acquire numerical information during discussions on travel times.

5.2.6 Speaking Skills

The pupils often exhibited hesitancy in speaking English, fearing mistakes despite their desire to communicate. This reluctance hindered their ability to express themselves fluently. Tony, being somewhat shy, was particularly affected, requiring prompts from the instructor to facilitate his responses.

5.2.7 Writing Skills

Many pupils omitted cohesive words in their essays, leading to a lack of logical flow. This may be attributed to limited writing practice in previous English lessons. Tony expressed concerns about spelling mistakes and struggled with the use of cohesive devices in his writing.

These detailed observations provide a comprehensive view of the pupils' English language learning behaviors, highlighting areas of strength and weakness. The findings are crucial for developing targeted teaching strategies that align with Piaget's Cognitive Development Theory and enhance the pupils' English speaking and listening skills in early education.

6 Conclusion and Implication

6.1 Conclusion

The present study, employing a non-participatory observation approach and grounded in Piaget's Cognitive Development Theory, has provided valuable insights into the English speaking and listening learning behaviors of elementary school pupils. The findings reveal a complex interplay between the pupils' cognitive developmental stages and their linguistic proficiency, particularly in the areas of grammar, lexis, pronunciation, reading, listening, speaking, and writing. The analysis has highlighted the pupils' strengths and weaknesses, and has identified specific areas where targeted instructional strategies can be implemented to enhance their English language skills.

The study confirms that Piaget's Cognitive Development Theory offers a robust framework for understanding the challenges and opportunities faced by elementary school pupils in acquiring English speaking and listening skills. The pupils' proficiency in using articles and their difficulties with "-ed" and "-ing" participles, as well as their struggles with phrasal verbs and connected speech, are indicative of their cognitive development stages. The findings suggest that while the pupils are capable of concrete operational thinking, they face challenges in transitioning to more abstract grammatical and lexical concepts. Furthermore, the pupils' reading and listening comprehension difficulties, as well as their hesitancy in speaking and challenges in writing coherence, point to the need for instructional strategies that support their cognitive maturation and language acquisition.

6.2 Implications for Practice

The implications of this study for educational practice are significant. Educators should consider the cognitive developmental stages of their pupils when designing English language curricula and instructional strategies. For grammar instruction, a gradual approach that builds from concrete examples to more abstract concepts may be beneficial. In teaching vocabulary, the use of visual aids and contextual learning can help pupils map new lexical forms onto their existing cognitive structures. Phonological training should be integrated to support the development of connected speech and smooth blending of sounds.

For reading comprehension, instructional interventions should focus on developing higher-order cognitive strategies such as summarization, inference, and synthesis. Listening activities should be structured to manage cognitive load, providing scaffolding for pupils to process auditory input effectively. Speaking practice should be encouraged in a supportive environment to build cognitive confidence and fluency. Writing instruction should emphasize the development of cognitive skills for organizing and structuring text, using cohesive devices to enhance coherence.

6.3 Implications for Policy

The findings also have implications for educational policy. Curriculum designers should ensure that English language teaching in elementary schools is aligned with the cognitive development of pupils, incorporating a balance of communicative and grammatical approaches. Assessment methods should be revised to evaluate not only grammatical accuracy but also the pupils' ability to use English for communication, including speaking and listening skills. Professional development programs for teachers should focus on equipping them with the knowledge and skills to support the cognitive and linguistic development of their pupils.

6.4 Implications for Future Research

This study opens avenues for future research. Further investigation into the specific cognitive strategies that pupils employ during language learning can provide deeper insights into the learning process. Longitudinal studies can track the progress of pupils through different cognitive stages and their corresponding language proficiency levels. Additionally, research can explore the impact of technology-enhanced learning environments on the cognitive and

linguistic development of elementary school pupils, similar to the UEnglish app study which found that technology can significantly enhance students' English speaking skills and motivation.

7 Limitations

7.1 Theoretical Limitations

Piaget's Cognitive Development Theory, while seminal in understanding the intellectual growth of children, has been subject to various criticisms. One significant limitation is the theory's lack of empirical evidence supporting the strict stages of cognitive development. Research has shown that children may acquire certain cognitive abilities earlier than suggested by Piaget's model, indicating a possible limitation in the universal applicability of his theory. Furthermore, Piaget's theory may not adequately address the role of social and cultural factors in cognitive development, which can influence the cognitive processes and development of children across diverse populations. This suggests that the theory may not fully capture the complexity of cognitive development in a multicultural educational setting.

7.2 Methodological Limitations

The non-participatory observation approach, while valuable for capturing authentic and unbiased data, also has its limitations. The observer effect, where the presence of the researcher may influence the participants' actions, is a potential issue that could reduce the validity of the observations. Additionally, the selectivity of the observation process means that not all aspects of the pupils' learning behaviors can be captured. This limitation can be mitigated by observing as many different circumstances as possible over an extended period, but it remains a challenge in practice.

7.3 Contextual Limitations

The study's focus on a specific educational setting in China may limit the generalizability of the findings to other cultural and educational contexts. The educational system, curriculum design, and teaching practices in China are unique and may not be representative of those in other countries. This cultural specificity may affect the applicability of the findings to a broader global context.

7.4 Sample Size and Representativeness

The study was conducted in a single elementary school classroom, which limits the representativeness of the sample. A larger and more diverse sample would be necessary to generalize the findings to a wider population of elementary school pupils. The homogeneity of the sample may also influence the results, as children from different socioeconomic backgrounds and cultural contexts may exhibit different learning behaviors and cognitive development patterns.

7.5 Technological Considerations

Piaget's theory, developed in a pre-digital era, does not sufficiently address the role of technology in shaping cognitive processes. In today's technology-driven world, children are exposed to a highly dynamic and interconnected digital environment, which may influence their learning and cognitive development in ways not accounted for by Piaget's model. This limitation suggests that the theory may need to be adapted or supplemented to better understand the cognitive development of children in the modern educational landscape.

About the Author

Xiwen Huang was born in Shangtou City, Guangdong Province. He obtained master's degree from Macau University of Science and Technology, China. His research interests include English textbook analysis, English Pedagogy, Teaching English as a second language; Jie Yang was born in Deyang City, Sichuan Province, in 1999. His research interests include political economics, tourism, international relation.

References

- [1] Adamson B., & Morris P. (1997). The English Curriculum in the People's Republic of China. *Comparative Education Review*, 41(1), 3–26.
- [2] Analysis of the improvement path of English listening and speaking ability based on big data technology. (2023). *Applied Mathematics and Nonlinear Sciences*, 0(0).
- [3] Bai B., & Zhou H. (2024). Standards, Instruction and Assessment of EFL Writing in Schools: Lessons From China's Basic Education. *European Journal of Education*.

- [4] Cerovac M., & Keane T. (2024). Early insights into Piaget's cognitive development model through the lens of the Technologies curriculum. *International Journal of Technology and Design Education*.
- [5] Clark S. C. (1995). Piaget's theory and its value for teachers. *Educational Philosophy and Theory*, 27(2), 64–88.
- [6] Davies A. (1967). The English proficiency of overseas students. *British Journal of Educational Psychology*, 37(2), 165–174.
- [7] Fang X., & Garland P. (2014). Teacher Orientations to ELT Curriculum Reform: An Ethnographic Study in a Chinese Secondary School. *Asia-Pacific Education Researcher*, 23(2), 311–319.
- [8] Gao W., & Wang M. (2024). Listenership always matters: active listening ability in L2 business English paired speaking tasks. *International Review of Applied Linguistics in Language Teaching*, 0(0).
- [9] Hwang S.-S., & Xi J. (2008). Structural and Individual Covariates of English Language Proficiency. *Social Forces*, 86(3), 1079–1104.
- [10] Jin Y., Wu Z., Alderson C., & Song W. (2017). Developing the China Standards of English: challenges at macropolitical and micropolitical levels. *Language Testing in Asia*, 7(1), 1–19.
- [11] Kang O., Moran M., Ahn H., & Park S. J. (2020). Proficiency as a mediating variable of intelligibility for different varieties of accents. *Studies in Second Language Acquisition*, 42(2), 471–487.
- [12] Klausmeier H. J., & Hooper F. H. (1974). Conceptual Development and Instruction. *Review of Research in Education*, 2(1), 3–54.
- [13] Lin M., & Francis A. L. (2014). The relationship between fluency, intelligibility, and acceptability of non-native spoken English. *Journal of the Acoustical Society of America*, 135(4), 2227.
- [14] Liu H., & Fang F. (2021). Towards a Global Englishes-aware National English Curriculum of China. *Elt Journal*.
- [15] Liu W. (2016). The changing pedagogical discourses in China: The case of the foreign language curriculum change and its controversies. *English Teaching-Practice and Critique*, 15(1), 74–90.
- [16] Lourenço O., & Machado A. (1996). In defense of Piaget's theory: A reply to 10 common criticisms. *Psychological Review*, 103(1), 143–164.
- [17] Sandler A., & Sandler J. (2008). Piaget's approach to problems of intellectual development. *Developmental Medicine & Child Neurology*, 3(1), 25–28.
- [18] Siegler R. S., & Ellis S. (1996). Piaget on Childhood. *Psychological Science*, 7(4), 211–215.
- [19] Soli S. D., & Sullivan J. A. (1997). Factors affecting children's speech communication in classrooms. *Journal of the Acoustical Society of America*, 101(5), 3070.
- [20] Tadlock D. R. (1986). A practical application of psycholinguistics and piaget's theory to reading instruction. *Reading Psychology*, 7(3), 183–195.
- [21] Wang W., & Lam A. S. L. (2009). The English Language Curriculum for Senior Secondary School in China Its Evolution from 1949. *RELC Journal*, 40(1), 65–82.
- [22] Winstanley M. A. (2022). Stages in Theory and Experiment. *Fuzzy-Structuralism and Piagetian Stages. Integrative Psychological and Behavioral Science*, 57(1), 151–173.
- [23] Yan C. (2015). We Can't Change Much Unless the Exams Change: Teachers' Dilemmas in the Curriculum Reform in China. *Improving Schools*, 18(1), 5–19. <https://doi.org/10.1177/1365480214553744>
- [24] Yan C., & He C. (2012). Bridging the implementation gap: an ethnographic study of English teachers' implementation of the curriculum reform in China. *Ethnography and Education*, 7(1), 1–19. <https://doi.org/10.1080/17457823.2012.661585>