## Developmental Stages of L2 Syntactic Acquisition: An Empirical Study in Thai EFL Context

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The Asian Conference on Education 2023 Official Conference Proceedings

#### Abstract

This research aimed to identify the predominant developmental stages in which the majority of Thai EFL university students were currently operating. The empirical study of L2 syntactic acquisition was conducted within the framework of English question formation developmental stages, designed to address challenges in EFL learning. In this qualitative investigation, a purposive selection process was employed, enlisting a group of 120 intermediate to high proficiency university students as research participants. The evaluation of students' proficiency levels utilized the Standardized 300D Test of Nelson English Tests, while a picture-cued written task served as the research instrument to assess their competence in wh-question formation. The analysis encompassed 120 writing samples produced by non-English major students at Kasetsart University, Kamphaeng Saen Campus, employing Interlanguage Analysis. The outcomes, guided by the research hypothesis, revealed a discrepancy, indicating falsification, as 51 participants were currently operating at developmental stage 2:  $Aux^{2nd}$ ,  $Do^{2nd}$  (42.50%), with statistical significance at the 0.01 level. Moreover, it was noticed that prerequisite knowledge from earlier developmental stages might not have been fully acquired in advance. From a pedagogical standpoint, the study recommended the implementation of a classroom model specifically tailored to address EFL learning challenges, particularly in the realm of syntactic acquisition.

Keywords: Developmental Stages, Syntactic Acquisition, Second Language Acquisition (SLA), English Writing, English as a Foreign Language (EFL)

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#### **Background of Study**

In the contemporary interconnected and globalized era, English plays a pivotal role as a global lingua franca. Its significance transcends mere communication, encompassing diverse domains such as business, education, and international relations. Proficiency in English writing skills holds particular importance, serving as a crucial tool for expressing ideas, conducting business transactions, and participating in academic endeavors. The ascendancy of English as a dominant language on the global stage has heightened the demand for effective English language learning strategies, especially in nations where English is taught as a Foreign Language (EFL) (Smith, 2023). Thailand exemplifies such a context, where the importance of English, especially in the domain of writing, is underscored by its relevance in both business and educational contexts.

In the Thai context, English assumes the designation of an EFL, and proficiency in the language is deemed essential for individuals aspiring to achieve success in both local and international arenas. The economic and academic advantages associated with a proficient command of English, particularly in writing, have led to an increased emphasis on English language education in Thailand (Nguyen, 2023). This emphasis is evident in various educational policies and programs aimed at enhancing English language skills. In addition, the business sector places a premium on effective English communication, with proficient writing skills being recognized as a key asset. However, despite concerted efforts, traditional methods of English language teaching in Thailand, particularly those centered on grammar instruction, have exhibited limitations in fostering practical language skills.

Historically, English education in Thailand has been characterized by a predominant emphasis on grammar rules and rote memorization, reflecting a conventional and rigid approach. While grammar undeniably plays a crucial role, an excessive focus on this aspect may hinder the development of practical language skills, especially in writing. Research suggests that an overly narrow focus on grammar might impede learners from acquiring a natural and intuitive grasp of sentence structure, consequently limiting their ability to communicate effectively (Smith, 2018). The imperative for a paradigm shift in English language teaching in Thailand becomes apparent, necessitating innovative and effective strategies that transcend the traditional confines of grammar-focused instruction.

The shortcomings of traditional English language teaching methods underscore the need for a more nuanced approach, particularly in the realm of writing. The exploration of the Developmental Stages of English Language sentence formation presents an intriguing avenue. Understanding how learners progress through distinct stages in acquiring syntactic structures can offer valuable insights into effective pedagogical strategies (Brown, 2019). Research in this domain has the potential to reshape the landscape of EFL education in Thailand, providing a fresh perspective on the development of English writing skills. By directing attention to the developmental stages of sentence formation, educators can tailor their approaches to align with learners' evolving linguistic abilities, fostering a more organic and comprehensive understanding of English syntax.

The applicability of the Developmental Stages of English Language sentence formation becomes even more pertinent in environments where opportunities for authentic language use are constrained. In numerous EFL contexts, including Thailand, learners may encounter challenges in immersing themselves in English-speaking environments, limiting their exposure to real-world language use. However, the developmental approach offers a structured framework capable of guiding learners through various stages of syntactic acquisition, thereby providing a roadmap for language development even in linguistically constrained environments (Brown, 2019). This adaptive approach aligns with the needs of EFL learners who may lack the daily exposure to English outside the classroom.

In conclusion, the global significance of English, coupled with its specific relevance in the Thai EFL context, underscores the necessity for a departure from traditional teaching methodologies, particularly in the domain of writing. The Developmental Stages of English Language sentence formation emerges as a promising avenue for exploration, offering a fresh perspective on syntactic acquisition. By assimilating and understanding these developmental stages into pedagogical practices, educators in Thailand can augment the effectiveness of English language instruction, equipping learners with the essential tools needed to navigate the globalized world through proficient writing skills.

# **Developmental Stages in English Question Formation**

The systematic process of language acquisition, whether within the realms of primary or secondary language acquisition, unfolded through developmental stages that progressed in a sequence beyond conscious control (Larsen-Freeman & Long, 1991; Heinsch, 1994; Willis & Willis, 2001). These stages, characterized as "developmental stages" by Johnston (1985), were integral to the comprehension of learnability, necessitating learners to encounter foundational knowledge in preceding stages for the acquisition of a new language. Pienemann's Processability Theory (PT) posited that learners navigated through distinct stages, emphasizing the impossibility of skipping stages (Pienemann, 2007). These stages played a pivotal role in understanding syntactic structures, particularly in the context of forming questions in English.

Dyson's (2008) elucidation of Pienemann's (2007) Developmental Stages of English Word Order delineated six sequential stages in syntactic acquisition, providing a structured framework for comprehending the stepwise progression of syntactic acquisition in English. The stages were outlined as follows:

- Stage 1 involves learners lacking syntactic categories such as nouns or verbs, leading to communication limitations relying on non-verbal cues.
- Stage 2 entails the production of flat strings as learners map words from their conceptual structure, resulting in the formation of basic SVO structures.
- Stage 3 allows learners to acquire operations involving sentence beginnings and ends, facilitating positional exchanges, such as moving auxiliaries to the beginning.
- Stage 4 introduces sentence-internal operations like subject-auxiliary inversion, constrained by working memory limitations.
- Stage 5 sees the emergence of linguistic processing proficiency, enabling the movement of second auxiliaries after wh-words or wh-phrases.
- Stage 6 focuses on operations within subordinate clauses, presenting challenges due to the cancellation of a prior developmental stage, where learners at this stage can cancel the inversion of subject-auxiliary in statements, marking a complex phase in syntactic development.

Previous research on developmental stages in English question formation highlighted their significance in language learning. Studies by Foster, Harris, and Joo (2010), Yumiko (2010), Mackey (1999), and Johnston (1985) emphasized positive sequences of acquisition, affirming that learners did not bypass stages. Doman (2012) examined Japanese ESL learners and

reported positive sequences in the highest stage of wh-question formation development. However, critiques by Hudson (1993) and Bachman (1990) contended that developmental stages offered a limited perspective, primarily focusing on syntax and morphology.

Foster, Harris, and Joo (2010) scrutinized English question formation in ESL university students, revealing diverse developmental patterns. Similarly, Yumiko (2010) conducted a longitudinal study on a Japanese learner, indicating independent development of developmental sequences in English questions. Mackey (1999) and Johnston (1985) identified positive sequences in grammatical development, reinforcing the necessity of prerequisite knowledge before advancing to the subsequent stage. Doman (2012) reiterated positive sequences in the highest stage, suggesting its utility in guiding language instructors.

Despite the positive viewpoints, critiques by Hudson (1993) and Purpura (2004) emphasized limitations. Hudson questioned the narrow focus on grammar in developmental stages, while Purpura pointed out empirical issues, such as limited fixed patterns and the absence of tests in classrooms. However, Doman (2007) argued against overlooking these drawbacks, emphasizing that developmental stages offered valuable insights into language acquisition, even if they provided only a partial view of language.

The study, specifically exploring English wh-question formation, omitted certain stages to align with its objectives. Stages 1 and 2, involving words and rising-intonation SVO structures, were excluded as participants were instructed to formulate wh-questions with given wh-words. Stages 3 and 4, encompassing do-fronting and yes-no inversion, copula inversion, were also excluded, as the study focused on subject and object wh-questions. Consequently, the framework for the study was presented in Table 1 below.

Stage	Wh-Question types	Examples	Description
1	<i>Wh</i> -fronting	What you write?	Learners formulate inquiries by positioning a constituent antecedent to the subject, verb, and complement, thereby constructing wh-questions that initiate with an initial wh-word.
2	Aux 2 <sup>nd</sup>	Who will you see?	Learners place the auxiliary, be it "do" or an alternative variant, in the
	Do 2 <sup>nd</sup>	What does she do?	second position during the construction of direct queries, and they extrapolate this pattern to indirect interrogatives through the process of overgeneralization.
3	Cancel Inversion	I wonder who he is.	Learners comprehend the syntactic structure employed in the construction of indirect inquiries.

Table 1: The Modified Developmental Stages in L2 English *Wh*-Question Formation

Source: Adapted from Dyson (2008)

In summary, despite criticisms previously directed towards developmental stages within the realm of English interrogative structure, empirical research confirmed their pivotal role in guiding language acquisition. The manifestation of positive sequences of acquisition, as elucidated in diverse scholarly investigations, underscored the integral contribution of these stages to the developmental trajectory of learners, thereby providing invaluable insights for language educators. Despite the critical discourse surrounding them, developmental stages persisted as an invaluable instrument in illuminating the intricate processes underlying language acquisition.

# **Research Methodology**

The study aimed to identify the predominant developmental stages among Thai EFL university students. This qualitative research involved 120 non-English major learners at Kasetsart University, Kamphaeng Saen Campus, with an average age of 19.38, ranging from 18 to 22. Only intermediate-high English proficiency participants were chosen to ensure a more comprehensive analysis of syntactic errors related to English wh-question formation. This selection criterion was based on the understanding that lower proficiency learners might lack the necessary skills for this particular aspect of English (Condelli and Wrigley, 2003; Graham and Macaro, 2007).

After carefully selecting participants based on their proficiency levels, all 120 intermediate - high English proficiency learners, who had studied English as a foreign language for over 12

years, were included. Additionally, these learners had formal instruction in English whquestion formation as part of their regular program, establishing a common academic background among the participants.

The sole research instrument employed in this study was a picture-cued written task, adapted from Lightbown and Spada's (1999) work. This task prompted learners to envision appropriate questions based on provided pictures. The test, comprising 30 images, was slightly modified by altering graphics and incorporating an underlined answer, along with a wh-word (who, what, or which) in parentheses as a cue for each expected question. The inclusion of answers aimed not only to aid participants in creating precise questions but also to prevent confusion and the use of unintended wh-words such as where, when, why, or how.

The task required participants to generate 30 wh-questions, including 10 subject and 10 object wh-questions, along with 5 embedded subject and 5 embedded object wh-clauses. These specific wh-clauses served to assess knowledge at developmental stage 3: Cancel Inversion. Each image was displayed for one minute, allowing participants to move to the next item, ensuring a timed response for each question. An item of a picture-cued written task was shown in Figure 1 below.



Figure 1: Example of the picture-cued written task

During the written task, participants were required to employ the provided wh-word (in this instance, "who"), ensuring its logical relevance to the image and the underlined word in the response. For the specific item in Figure 1, the anticipated answer was "I wonder who Nelson meets."

The purpose of the test was to identify the general developmental stages of Thai EFL learners in acquiring subject and object wh-questions. The sample was chosen using purposive sampling, considering specific criteria aligned with the study's objectives, as wh-question formation had been formally instructed in their classes with explicit syntactic rules. All students, regardless of their major, were required to enroll in compulsory English courses during the first semester as part of their academic obligations.

In this research, data collection procedures occurred in two primary phases: (1) assessing the overall English proficiency level of participants and (2) administering a writing task utilizing the Standardized 300 D Test of Nelson English Tests. This test, adapted from Zahra and Farahani (2012), has been endorsed by various researchers for its reliability in evaluating learners' proficiency level, as indicated by studies by Yasser (2012), Zahra and Farahani (2012), Kolaei et al. (2013), Behnaz et al. (2014), and Gholam-Reza et al. (2014). The test's suitability for this study stems from its convenience, established standardization, and

accuracy in measuring proficiency. Comprising fifty multiple-choice items, the test evaluates participants' lexical, grammatical, and phonological knowledge (Fowler and Coe, 1976). The test format has been modified into a table for enhanced readability and comprehension. It includes two sheets: Sheet I, a question paper with three parts assessing lexical and grammatical knowledge, and Sheet II, an answer sheet capturing participants' personal details and responses to the fifty items. Participants required approximately 40 minutes to complete the entire test.

Based on the pilot test, data were gathered from 30 EFL learners who had a comparable academic background to the study participants. The standard deviation (SD) was 4.804, and the mean was 20.1. Participants scoring between 0 and 15.673 ( $\leq$ SD - mean) were categorized as having lower English proficiency, those between 15.674 and 25.207 (SD ± mean) were considered intermediate, and those between 25.208 and 50.000 ( $\geq$ SD + mean) were classified as having high proficiency (Gholam-Reza et al., 2014; Zahra and Farahani, 2012). In summary, participants scoring between 15.674 and 50.000 were selected for the study. Before administering the Standardized 300 D Test of Nelson English Tests to assess overall English proficiency, all participants were required to sign a consent form for ethical considerations.

The utilization of a writing task for data collection provided the advantage of securing authentic data, as participants were assigned the task of formulating wh-questions within a controlled environment. To prevent potential influences from external sources, participants were situated individually in the English language laboratory, each having private partitions, and were allocated a restricted timeframe. However, drawbacks associated with this data collection method included the susceptibility to biases and varied interpretations. To mitigate these issues, two experts with proficiency in teaching English writing were enlisted to validate the collected data and address any potential biased judgments.

The researcher conducted data analysis in alignment with the study's objective: identifying the overall developmental stages of Thai EFL university learners in the acquisition of subject and object wh-question formation. Initially, each written work, comprising 30 items (10 subject wh-questions, 10 object wh-questions, 5 subject embedded wh-clauses, and 5 object embedded wh-clauses), was individually examined. Every item was categorized into specific developmental stages based on the Modified Developmental Stages in L2 English Wh-Question Formation. The quantities of items within each stage were aggregated, and percentages were computed to ascertain the prevalence of developmental stages. The participant's current stage was determined by the highest percentage among the three developmental stages (stages 1, 2, and 3). Subsequently, after analyzing all written works, the overall developmental stages of wh-question formation for all participants were identified. Finally, statistical analysis, specifically Proportion Testing (z-test), was applied to establish the significance level for hypothesis testing. Approximately 10% of the analyzed data underwent validation by two experts to address any disparities in response checking. Discussions with the experts were conducted, and any discrepancies were resolved to ensure accuracy.

# Results

In scrutinizing the research hypothesis, a written task was employed to evaluate the developmental stage of each participant. The hypothesis postulated that the majority of Thai EFL university learners were operating at developmental stage 1: Wh-fronting. The

subsequent task focused on the syntactic structure of wh-questions, reflecting the participants' syntactic knowledge. The analysis entailed categorizing all 30 items in each written work to determine the corresponding developmental stage for each item. Following the completion of the categorization process, the items were tallied, and percentages were computed to discern the prevailing developmental stage for each participant.

The outcomes revealed a refutation of the hypothesis, with 51 participants (42.50%) presently functioning at developmental stage 2: Aux<sup>2nd</sup>, Do<sup>2nd</sup>. Moreover, 16 participants (13.33%) were currently at developmental stage 3: Cancel Inversion. However, data from 53 participants (44.17%) indicated that they were presently operating at developmental stage 1: Wh-fronting, corroborating the initial research hypothesis. In summary, the statistical analysis illustrated a higher percentage of participants not currently operating at developmental stage 1: Wh-fronting (55.83%), with a significance level of 0.01 (Z = 1.10,  $Z_{0.01} = 2.367$ ). Consequently, the results contradicted the research hypothesis.

Contrary to the research hypothesis, which posited that the majority of Thai EFL university learners operate at developmental stage 1: Wh-fronting, this hypothesis has been contradicted. The data indicates that 51 participants (42.50%) crafted wh-questions by positioning an auxiliary ('do' or another type) at the second position of the sentence, aligning with the knowledge required for developmental stage 2: Aux<sup>2nd</sup>, Do<sup>2nd</sup>. However, there is supporting data in favor of the research hypothesis. This is evident in 53 participants (44.17%) who formulated English wh-questions by placing a wh-word at the initial position of the sentence (without an aux-insertion), and 16 participants (13.33%) who constructed indirect clauses by canceling inversion. Despite the supportive data from the 53 participants, the statistical analysis reveals a significance level of 0.01, which contradicts the research hypothesis.

#### Discussion

#### **Developmental Stage 1: Wh-fronting**

In the identification of the developmental stages involved in the formation of English whquestions, participants were involved in a modified picture-cued written task. This task entailed the analysis of 30 wh-question items, encompassing subjects, objects, and embedded clauses. The findings unveiled that 53 participants (44.17%) demonstrated proficiency in constructing English wh-questions, particularly by fronting wh-words, indicative of mastery at developmental stage 1, surpassing stages 2 and 3. This observation aligned with the initially posited research hypothesis. Notably, among Thai speakers, the formation of object wh-questions without auxiliary insertion was commonplace, as the auxiliary was perceived as optional. Consequently, the majority of these participants formulated object wh-questions resembling subject wh-questions, potentially influenced by L1-transfer. Comparable patterns were observed in prior studies, illustrating a prevalent inclination among learners to predominantly operate at developmental stage 1, providing further insight into consistent findings within this language acquisition context.

# Developmental Stage 2: Aux<sup>2nd</sup>, Do<sup>2nd</sup>

The outcomes demonstrated that 51 participants (42.50%) proficiently generated English whquestions by incorporating an auxiliary in the second sentence position, indicating competence in the requisite knowledge at stage 2. Two plausible interpretations could be derived from these findings. Initially, participants successfully acquired aux-insertion during wh-question formation, having traversed developmental stage 1: Wh-fronting, as evidenced by their elicited wh-questions. However, subsequent to aux-insertion learning, they encountered challenges in distinguishing between subject and object wh-question structures due to insufficient L2 syntactic knowledge. As a result, they generalized this aspect to both wh-question types, encompassing wh-clauses. In this context, their current operation was construed as developmental stage 2: Aux<sup>2nd</sup>, Do<sup>2nd</sup>, influenced by overgeneralization arising from limited familiarity with the target language (Brown, 1994). Furthermore, in contrast to the proposition by Pienemann (2007) and Doman (2012) asserting that L2 learners must sequentially process structures for acquisition, the study's findings challenged Pienemann's (2007) assertion that learners cannot skip developmental stages. The analysis of written works revealed that learners could correctly formulate wh-questions in later stages while making wh-syntactic errors in preceding stages, suggesting that not all learners necessarily required full mastery of prerequisite knowledge in earlier stages before progressing. Various studies aligned with the notion that the acquisition of English wh-question formation did not consistently adhere to a positive sequential pattern and varied among individuals (Foster et al., 2010 and Yumiko, 2010).

### **Developmental Stage 3:** Cancel Inversion

Dyson's (2008) developmental stage necessitated extensive prerequisite knowledge, encompassing operations on subordinate clauses formed using wh-words and lacking auxiliary inversion due to the "cancelling" of knowledge acquired in stage 2. This presented a challenge for learners. Only 16 participants (13.33%) formulated embedded wh-clauses, with a restricted number displaying accurate ones, indicating canceled auxiliary inversion. The results imply that these participants had not fully comprehended the essential knowledge for wh-question formation, as evidenced by syntactic errors such as aux-omission, aux-insertion, aux-inversion, and inverted auxiliary in wh-clauses, reflecting inadequate familiarity with the target language. Previous studies have highlighted similar occurrences, attributing incomplete wh-question knowledge to influences such as insufficient L2 syntactic understanding, L1-transfer, overgeneralization, and learning difficulties in L2 contexts with differing L1 and L2 properties (Pienemann, 2007; Robert, 1998; Kumagami, 2006; Sheen, 2000; Jansen, 2005; Gao, 2009).

# **Conclusion - Pedagogical Implications**

Discerning the developmental stages of L2 learners, particularly in intricate language structures such as wh-question formation, provided advantages. This investigation illuminated the diverse developmental stages experienced by Thai EFL learners, offering assistance to both learners and educators in monitoring advancement. Educators, through the classification of learners based on their respective stages, could concentrate on crucial elements in each, ensuring a methodical learning trajectory. This method empowered learners to comprehend the target language progressively. Furthermore, educators gained insights into prerequisite knowledge, providing guidance on when to strategically introduce specific stages in the learning process. This knowledge proved invaluable for enhancing the learning experience for both learners and instructors. A classroom model designed to address EFL learning challenges, particularly related to syntactic acquisition, was delineated in Figure 2.

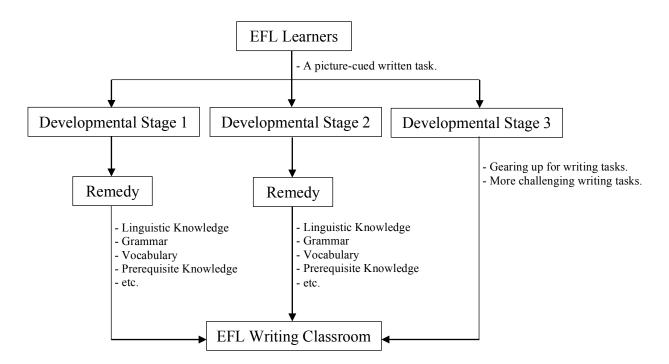


Figure 2: A Model of Teaching and Learning Process for EFL Writing

# Acknowledgement

I extend my heartfelt appreciation to Miss Nittaya Thabtimsai, Director of iFuture Institution, for her generous support that made my participation in the international research conference possible. Her encouragement and assistance have been instrumental in enriching my academic experience. I am grateful for her commitment to fostering research endeavors and for the opportunities provided under her guidance. Miss Nittaya's support reflects iFuture Institution's dedication to academic excellence, and I am truly thankful for the encouragement and resources that have facilitated my engagement in this valuable scholarly endeavor.

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