

Verb Error Analysis of Thai EFL Generation Z and Generation Alpha Students in Thailand

YUKI TAKAHASHI

Faculty of Humanities, Srinakharinwirot University, Thailand

NARATHIP THUMAWONGSA*

Faculty of Humanities, Srinakharinwirot University, Thailand

Corresponding author email: narathip@g.swu.ac.th

Article information	Abstract
<p>Article history: Received: 25 Jan 2024 Accepted: 5 Aug 2024 Available online: 8 Aug 2024</p> <p>Keywords: Error analysis Generation Z Generation alpha Interlingual error Intralingual error</p>	<p><i>In recent years, the shift in the teaching approaches employed in Thai English as a Foreign Language (EFL) classroom provides new opportunities and challenges to the teachers and students from Generation Z (1995 – 2009) and Generation Alpha (2010 – 2024). This study examines verb errors among Thai EFL learners from Generation Z and Generation Alpha to compare error types and sources. 300 written assignments from both generations were analyzed by Grammarly based on a mixed-methods approach adapted from Corder's (1974). The findings showed that Generation Z produced 466 errors, considerably more than Generation Alpha's 355 errors, with both cohorts producing all types of errors, namely misformation, omission, addition, and misordering, respectively. Despite Generation Z producing higher overall error detection, Generation Alpha displayed higher rates of the certain error forms, such as misuse of singular and plural verb usage and expletive construction. Interlingual interference was the most frequently produced error source for both groups. These findings highlight the balance between L1 and L2 in EFL classrooms and the significance of teacher supervision in promoting autonomous learning. The study provides valuable insights for EFL teachers, suggesting appropriate teaching strategies in writing classes tailored to different generations.</i></p>

INTRODUCTION

English has become the global language for communication, used by people worldwide regardless of their nationality. Due to the significance of English language proficiency, educators in applied linguistics have given considerable attention to the topics of learning and teaching the English language. Numerous researchers have identified potential pedagogical solutions for challenges faced by both learners and teachers in an English as a Foreign Language (EFL) context; however, they may not be universally applicable to every English learning context. In Thailand, for instance, learners struggle with low English proficiency even though English is taught from a young age and many researchers revealed that one of the common difficulties faced by Thai EFL learners is the verbs usage (Nonkukhetkhong, 2013; Promsupa et al., 2017; Watcharapunyawong & Usaha, 2013).

The differences between the Thai and English language systems are one of the reasons why Thai students find challenging to use the verb accurately in English. According to Kulsirisawad (2014), four types of verb errors are commonly produced by Thai EFL learners namely using the wrong verb tense, omitting 'be', lacking subject-verb agreement, and incorrect forming of irregular verb. These certain verb rules do not exist in Thai; therefore, it can contribute to difficulties in English writing (Watcharapunyawong & Usaha, 2013).

Apart from the absence of grammatical rules in learners' L1, an interlingual interference is another cause of Thai EFL students producing verb errors, where negative elements from the first language (Thai) affect the target language (English). Nevertheless, several research have revealed that these errors can also stem from intralingual factors, which are errors caused by the target language itself (Kampookaew, 2020; Sermsook et al., 2017). The significance of these sources of errors has drawn attention in the field, leading to extensive research on the difficulties faced by Thai EFL learners in English writing. However, only a few studies have focused on a particular grammatical error, especially verb errors, which are examined among Thai EFL students (Amnuai, 2020; Kampookaew, 2020; Phetdannuea & Ngonkum, 2017; Pongsukvajchakul, 2019; Sermsook et al., 2017). These studies have consistently found that verb errors, including subject-verb agreement, verb forms, and tenses, are among the most common and recurring errors in the written work produced by Thai EFL learners.

It is important to investigate the verb usage among Thai EFL learners to deliver a complete thought in English since verb is an essential word class in English, conveying actions and states of the subject in a sentence. According to Burton-Roberts (2011), in terms of English syntax, a sentence can be formed by a combination of subject and predicate. The subject can be either a noun or a pronoun which is called a noun phrase (NP) whereas a predicate must contain a verb which is called a verb phrase (VP). In addition, verbs possess grammatical characteristics such as tense, aspect, person, number, and mood (Richards & Schmidt, 2010). For this reason, comparing to other language skills, writing in English might be considered the most intricate for Thai EFL learners to master (Ismawati et al., 2021). Specifically, the dissimilar structures and components of English and Thai writing are believed to contribute to the occurrence of errors in Thai students' English writing (Kaweera, 2013).

As of 2023, the students in primary and high school in Thailand are known as Generation Z and Generation Alpha who were born between 1995 to 2009 and 2010 to 2024, respectively. Because of the rapid digital development, the methods of educating have been adjusted from traditional learning to more engaging, visual, multimodal, and hands-on learning to allow the new generations to learn and to be engaged in the classroom. Even though technology has been playing a dominant role in two recent generations, a slight difference can be seen in terms of amount of technology usage adopted in the last decade. According to Phoocharoensil (2022), the English Language Teaching (ELT) research trends in Thailand between 2019 and 2021 showed that technological implementation within teaching methodology, namely mobile assisted language, online learning, and use of social media, were frequently explored. On contrarily, less technology was likely to be implemented in prior generation's research as they focused more on student performance and learning support (Deerajviset, 2022). Besides, several research employed web-based methodology, but it only provided the reading resources from internet (Kongkapet, 2007; Wongpattanakit, 2006).

As Generation Z and Generation Alpha gradually become the dominant groups in schools, it is vital to study the differences of errors made between two generations which highlights several importance. Firstly, it aids in recognizing common strategies to enhance students' writing quality, especially when they are at older age and writing skill is important for academic progress (Kampookaew, 2020; Putamata, 2011). Secondly, for younger students, examining errors can help to investigate their unexploited learning potential, and provide insights to teachers to adjust their approaches to reduce error's production (Köpfer, 2022). By addressing these errors early on, effective approaches to minimize errors can be identified, ensuring that fewer errors are produced among the future generation. Therefore, analyzing grammatical errors has been a fundamental aspect in comprehending how language is acquired, and the strategies employed by learners (Corder, 1967). While numerous studies on error analysis have been conducted worldwide in the context of English as a Foreign Language (EFL) writing (Debora, 2018; Helmiyadi, 2018; Khatter, 2019; Liu et al., 2022; Sari, 2016), only a few have specifically focused on verb errors (Solihat & Novianti, 2015; Vazariah & Rozimela, 2020). Furthermore, in the Thai EFL context, numerous studies have analyzed learners' errors, but those specifically focusing on verb errors are limited. Verb errors have been frequently identified among Thai EFL learners indicating a need for further analysis of this specific error type to address the research gap (Amnuai, 2020; Jenwitheesuk, 2009; Kampookaew, 2020; Nonkukhetkhong, 2013; Phetdannuea & Ngokum, 2017; Pongsukvajchakul, 2019; Promsupa et al., 2017; Sermsook et al., 2017; Watcharapunyawong & Usaha, 2013). Also, most of the research in the Thai context has focused on interlingual and intralingual errors made by university-level students (Phetdannuea & Ngokum, 2017; Phuket & Othman, 2015; Sermsook et al., 2017). Nevertheless, this study seeks to investigate the influence of both interlingual and intralingual errors on the English writing skills of Thai learners from Generation Z and Generation Alpha. Since these cohorts are the current learners who will soon eventually become significant global citizens, the findings of this study can be used to examine the hypothesis on how different teaching approaches and the role of technology in two distinguished generations are likely to either avoid or produce more language errors. Therefore, two research questions were developed for this study: (1) What are the differences of types of errors found between the Generation Z's and Generation Alpha's Thai EFL learners? (2) What are the differences of sources of errors found between the Generation Z's and Generation Alpha's Thai EFL learners? The outcomes of this study aim to investigate the verb errors made by two generations and to provide the teachers with more contemporary and applicable teaching approaches for the forthcoming generations. Not only does it contribute to the academic personnel, but it also provides references for the researchers to conduct further research in this field.

LITERATURE REVIEW

Types of verb errors

A surface structure taxonomy introduced by Dulay et al. (1982) is one of the error classifications that develops hypothesis and inferences in the second language learning process. The surface structure taxonomy has been employed widely in categorizing language errors, especially in writing, as it is based on the altered surface language elements that can be seen from the

written production. Thus, the deep structures of the language are disregarded which makes it one of the common descriptive error classifications that allows the researchers to understand learner's cognitive process that underlies their target language construction. In addition, the taxonomy develops deep awareness that learner's errors can be produced due to various factors. To illustrate, the errors can possibly be produced by learner's carelessness or laziness; however, they can also be produced because of the learner applying some temporarily principles when they produce the target language.

According to Dulay et al. (1982), the surface structure taxonomy is classified into four categories namely omission, addition, misformation, and misordering. As this study focuses on verb errors, the descriptions and examples illustrated below by Dulay et al. (1982) are based on verbs. The first category is an omission error which happens when the item that must be placed in a sentence is omitted. According to James (1998), omission is not comparable to ellipsis as it is ungrammatically allowed to exclude certain element from a sentence. Both content morphemes and grammatical morphemes are frequently omitted in the early stages of learning the target language. Dulay et al. (1982) argued that omission errors are likely to be less common at the later stage once the learners employ compensatory strategies.

Following by addition error, it is the appearance of an item in a well-formed sentence that is not supposed to be presented and it often occurs once the learner has mastered a set of new rules in their target language. It can be divided into three subtypes which are double markings, regularizations, and simple addition. The first subtype, double markings, is when an item that the learner fails to delete in a sentence despite being correct in other structures. For example, the learner might say '*I didn't went*' instead of '*I didn't go*' (Dulay et al., 1982). The second addition error is a regularization which happens when the learners apply the specific rules to every utterance without an exception (Dulay et al., 1982). For instance, the learner might say '*eated*' instead of '*ate*' as the rule for regular verb form is applied to the irregular verb form. The last form is simple addition which includes the other addition errors that do not list under double markings or regularizations. For example, '*doesn't*' in '*The fishes doesn't live in the water*' is a simple addition as a morpheme '*-es*' is added to the verb in spite of plural subject (Dulay et al., 1982).

The third category is a misformation error which is the use of incorrect structure or morpheme in a sentence. It can be classified into three subtypes including regularizations, archi-forms and alternating forms. Firstly, regularization occurs when a regular rule is applied to irregular form produces regularizations. For example, the learner might say '*runned*' instead of '*ran*' (Dulay et al., 1982). Followed by an archi-form, it occurs when the learners select only one class of forms to represent in another language context. In English verb usage, an archi-form can be found when the learners place infinitive verb form after every verb such as '*finish to watch*' (Dulay et al., 1982). Lastly, an alternating form occurs once the learners broaden their lexical and syntactical knowledge as they alternately use different items of a class in a sentence. To illustrate, the learners might use participle forms alternately with the past irregular forms as in '*I seen her yesterday*' and '*He would have saw them*'.

The last category is the misordering error which occurs when a morpheme or a group of morphemes are placed in the incorrect order. This type of error is common when the learners

do literal translation from their mother tongue to the target language (Dulay et al., 1982). One of the common misordering errors is the incorrect formation of indirect questions such as 'I don't know *what is that*' instead of 'I don't know *what that is*' (Dulay et al., 1982). The summary of types of errors discussed above is presented in Table 1.

Table 1
A summary of types of verb errors (Dulay et al., 1982)

Types of Verb Errors	Sentence Examples	Corrections
Omission	I [0] also not good at English.	I <u>am</u> also not good at English.
Addition		
Double Markings	We <u>didn't</u> <u>went</u> there.	We <u>didn't</u> <u>go</u> there.
Regularizations	I <u>putted</u> away my bags.	I <u>put</u> away my bags.
Simple Addition	The fishes <u>doesn't</u> live in the water.	The fishes <u>don't</u> live in the water.
Misformation		
Regularization	I <u>runned</u> .	I <u>ran</u> .
Archi-forms	<u>This</u> dogs are mine.	<u>These</u> dogs are mine.
Alternating Forms	I <u>seen</u> her yesterday.	I <u>saw</u> her yesterday.
Misordering	I don't know <u>what is that</u> .	I don't know <u>what that is</u> .

Note. [0] refers to the item that was omitted in the sentence.

In addition to identifying the types of errors, it is essential to examine how those errors were caused, as this helps in developing strategies to enhance the learning process and prevent students from repeating the same errors.

Sources of verb errors

Once the errors are categorized based on their types, the study of sources of errors plays a dominant role to understand how learners produce errors and what variables control them. Brown (2007) supported this point as it broadens the understanding of the learners' cognitive and affective processes within the language system during their second language acquisition. A variety of sources of errors categorizations had been proposed by several scholars; for example, Richards's (1971) interlanguage errors and intralingual errors, Brown's (2007) interlingual transfer, intralingual transfer, the context of learning, and communication strategies, and James's (1998) interlingual errors, intralingual errors, communications-strategy, and induced errors.

In Thai EFL context, several studies have been conducted for decades to study the sources of errors appeared the written production by Thai EFL learners (Phuket & Othman, 2015; Sattayatham & Somchoen, 2007; Watcharapunyawong & Usaha, 2012). Since this study focuses on the Thai EFL context, the selected literature review is based on Kaweera (2013) in which provides a vibrant picture of the sources of errors produced by Thai EFL learners, explaining two aspects of interlingual interference (lexical and syntactic) and seven aspects of intralingual interference (false analogy, misanalysis, incomplete rule application, exploiting redundancy, overlooking cooccurrence restrictions, hypercorrection, and overgeneralization). The errors exemplified in aforementioned study were produced during EFL learning based on James's (1998) theoretical concept of interlingual and intralingual errors.

Interlingual error is one of the sources of errors caused due to the interference of learner's mother tongue—Thai language (L1). The errors in this case may result from learners inaccurately applying a set of L1 language patterns to the target language. Richards (1971) pointed that such phenomenon can be termed when the learners lack ability to distinguish two language systems. Four types of verb errors that are commonly produced by Thai EFL learners are 1. Misuse of English tense, 2. Omission of 'be' 3. Lack of subject-verb agreement and 4. Incorrect formation of irregular verbs (Kulsirisawad, 2014). In addition to that, according to Kaweera (2013), interlingual errors in Thai EFL context can be explained based on two aspects which are L1 lexical interference and L1 syntactic interference.

The first aspect of interlingual error is the L1 lexical interference. Based on James's (1998) semantic errors in lexis, Thai EFL students tend to direct translate from Thai to English when they compose writing in English. Thus, they often produce incorrect lexical choice due to literal translation. According to James (1998), two main types of semantic errors in lexis are considered as interlingual errors which are confusion of sense relation and collocational errors. Confusion of sense relations occur when L2 learners fail to make lexical distinction due to the limited competence of the target language. For example, Thai EFL learner might write '*I play the internet*' instead of '*I surf the internet*' since '*play*' in Thai has multiple meanings such as doing something pleasurable, acting in the movie, or surfing the internet. Besides, collocation errors occur when the learners assumed that certain item can be collocated in the same way in both L1 and L2. For example, Thai EFL learner might say '*He described about his house*' as they directly translated /*giaao^L gap^L*/ to '*about*' in English. However, certain preposition is redundant as it does not collocate with the verb '*described*'.

Apart from incorrect lexical choices, direct translation from Thai to English is also common for Thai EFL learners when they construct English sentences. Several grammar errors such as the incorrect usage of subject-verb agreement, verb tense, passive voice, relative clause, expletive structure, and word orders are commonly produced due to the differences between L1 and L2 and inexistence of certain L2 language patterns in Thai language. Pongpairaj (2002) classified the L1 syntactic interference in Thai EFL written compositions into three main types which are sentence construction, sentence boundary, and word order. Sentence construction errors consist of three subtypes namely the misuse of expletive constructions, adjectival constructions, and transitive verb phrase constructions. Expletive construction, '*there + verb to be*', is one of the English sentence constructions that Thai EFL students find it challenging as they often replace certain structure with the equivalent construction in Thai: '*mi (=have) + noun*'. Adjectival constructions occur when a copular verb that links the subject and the complement of the sentence is excluded. This type of error is also common as certain verb is unnecessary in Thai language. Lastly, incorrect transitive verb phrase constructions occur when a direct object is omitted after a transitive verb, and this type of error is often produced since it can be optional in Thai language if a sentence provides a clear context. Apart from the sentence constructions, Thai EFL students find it difficult to define the sentence boundary, including run-on sentences and sentence fragments. As the usage of punctuation mark to indicate the sentence boundary does not exist in Thai language system, Thai EFL learners often leave a space or place a comma to separate the sentences which result in making them run-on sentences. In addition, sentence fragments are commonly produced when they fail to include both subject and predicate

within the sentence. Ultimately, although English and Thai have the same word linear order, some sentences in English can be formed differently such as indirect questions and adjective orders.

In contrast to previously mentioned interlingual errors, intralingual errors refer to the errors caused due to the faulty learning of the target language (Richards & Schmidt, 2010). James (1998) explained the concept of intralingual errors based on learning strategies that can be produced in EFL writing: False analogy, misanalysis, incomplete rule application, exploiting redundancy, hypercorrection (monitor overuse), and overgeneralization.

The first aspect of intralingual error is a false analogy which happens when the learners incorrectly assume that new item complies the same rule with the existing item without considering exceptions. For example, they might have learned that past simple form can be formed by adding '-ed' so '*hitted*' and '*throwed*' are faultily written (James, 1998).

The second aspect intralingual error is a misanalysis which occurs when the learners created a faulty hypothesis of L2 knowledge and apply them to their writings. For example, the learner might say '*its*' instead of '*their*' to show plural possession (James, 1998).

Followed by the third type of intralingual error, incomplete rule application refers to an occurrence whereby the learners fail to acquire a comprehensive understanding of language rules and apply simplified and less complex rules instead of the accurate ones. For example, the learner might say 'I suggest *to go* to the mall' instead of 'I suggest *going* to the mall' as they failed to write the correct verb form that follows the verb 'suggest' (James, 1998).

Exploiting redundancy, as Kaweera (2013) illustrated that it does not insert any additional meaning to the sentences, includes word redundancy, qualifier redundancy, and synonyms redundancy. For instance, the learner might say '*return back*' instead of '*return*' (Kaweera, 2013).

The next type of intralingual error is the overlooking cooccurrence restriction. It arises when the learners fail to consider the restrictions of the existing structure of the target language. The learner might say 'I decided to *gave*' instead of 'I decided to *give*' (Kaweera, 2013). They might assume that every verb in the sentence should be in past form to show past time element.

Followed by hypercorrection, it is a type of error that occurs when a learner overly monitors their use of the target language and tries to consistently apply its rules to other sentences or compositions. To illustrate, the learner might mistakenly write 'I am a second *years* student' instead of 'I am a second *year* student' as they assume that 'second year' should be pluralized (Kaweera, 2013).

The last type of intralingual error is an overgeneralization. It is the occurrence where the learners apply their existing knowledge of a language to a new language situation without recognizing any exceptions or deviations from the existing rules. For example, the learner might say '*her* likes anime character' instead of '*she* likes anime character' as they overgeneralized

the use of subject and object pronouns (Kaweera, 2013). The summary of sources of verb errors discussed above is presented in Table 2 and Table 3.

Table 2
A summary of sources of verb errors (Interlingual errors) (Pongpairoj, 2019)

Types of Interlingual Errors	Sentence Examples	Corrections
L1 Lexical Interference		
Confusion of Sense Relations	I play the internet.	I surf the internet.
Collocation Errors	He described about his house.	He described his house.
L1 Syntactical Interference		
Sentence Construction		
Expletive Construction	They have five people.	There are five people.
Adjectival Construction	The sky [0] dark.	The sky is dark.
Transitive Verb Phrases Construction	You can decorate [0] with toys.	You can decorate them with toys.
Sentence Boundary		
Run-on Sentence	There were many broken windows when the wind blew they made a sound.	There were many broken windows. When the wind blew, they made a sound.
Sentence Fragments	When I first met her. We were twelve.	When I first met her, we were twelve.
Word Order	She is older than her friend about 14.	She is about 14 months older than her friend.

Note. [0] refers to the item that was omitted in the sentence.

Table 3
A summary of sources of verb errors (Intralingual errors) (Kaweera, 2013)

Types of Intralingual Errors	Sentence Examples	Corrections
False Analogy	Raffael hitted my head so I threwed the truck at his head.	Raffael hit my head so I threw the truck at his head.
Misanalysis	I have two pets. It's a dog and a cat.	I have two pets. They are a dog and a cat.
Incomplete Rule Application	At that time, I didn't know what should I say to him.	At that time, I didn't know what I should say to him.
Exploiting Redundancy		
Word	I am very happy to get a free gift .	I am very happy to get a gift .
Qualifier	Pang is very perfect .	Pang is perfect .
Synonym	I repeated it again .	I repeated it.
Overlooking Cooccurrence Restriction	I am willing to meeting with all my old friends.	I am willing to meet with all my old friends.
Hypercorrection	I am a second years English major student.	I am a second-year English major student.
Overgeneralization	He speaks very good and I understand him.	He speaks very well and I understand him.

Beyond identifying error types and sources, a proper approach should be employed to understand learners' difficulties and develop effective pedagogical strategies.

Error analysis

Once the frameworks of types and sources of errors are selected, the learner's errors can be studied linguistically by an error analysis approach to understand the process underlying second language acquisition (Seddik, 2023). Corder (1967) illustrated four crucial points of

the error analysis. Firstly, the approach must focus on how both L1 and L2 are learned as they are governed by similar underlying mechanisms, procedures, and strategies. Secondly, it is important to differentiate between language intake and input concepts. Errors should not be linked to what learners receive, as they are considered indications of the learner's internalized syllabus. Thirdly, errors provide valuable evidence of L1 and L2 learners' ability to develop independent language systems. Lastly, it is crucial to distinguish the concepts of errors and mistakes since they have distinct notions. Errors are produced due to the absence of knowledge of the linguistic rules of the L2, whereas mistakes refer to a set of errors caused by physical circumstances, which can be corrected by the learners.

To analyze learners' errors, several steps must be followed. Respective scholars (Corder, 1974; Ellis, 1997; Gass & Selinker, 2008) proposed different error analysis steps; however, they share several similarities. In this study, a research framework was specifically designed in order to collect and analyze data from Thai EFL students who belong to Generation Z and Generation Alpha. The framework was based on Corder's (1974) five-step error analysis as it has been widely applied in the study of error analysis in Thailand (Phetdannuea & Ngonkum, 2017; Patarapongsanti et al., 2022). The steps include collection, identification, description, explanation, and evaluation of errors; however, the last step, evaluation of errors, was excluded as Ellis (1994) had argued regarding the unclear criteria used in judging the errors.

Based on the literature reviewed, the errors were categorized based on Dulay et al.'s (1982) surface structure taxonomy, and the causes were explained based on Kaweera's (2013) classification of sources of errors as these frameworks are well-suited to the context of this study.

Grammarly

Error analysis has been widely employed to study learners' errors but an alternative method, computer-aided error analysis, has become a new flavor of error analysis in the field with a technology advancement (Al-Ahdal, 2020). For instance, Grammarly is one of the writing tools developed to assist in enhancing English writing skills. It is widely used among academic professionals to assess written tasks in a short span of time (Rao et al., 2019). Grammarly offers five suggestions to improve writing confidence: correctness, clarity, engagement, delivery, and citations. These features are available in the Free Plan, but users can access more advanced features by subscribing to the Premium plan. Many users, including students, claim that Grammarly has a user-friendly interface that is easy to use and straightforward to understand (Fitria et al., 2022; Pratama, 2020). In addition, Grammarly has been widely used among academic professionals, including academic staff and students, and had been extensively agreed that it is one of the helpful writing support tools to avoid writing errors (Rao et al., 2019). Firstly, lexical and syntactical errors were minimized with the aid of Grammarly usage in written compositions (Hakiki, 2021; Nur Fitria, 2021; Pratama, 2020). Secondly, from teachers' point of view, Grammarly has been found to be helpful in terms of assessing students' writing as it shortened their time (Wijayanti et al., 2021). According to a study conducted by Sahu et al. (2020), Grammarly demonstrated superior performance in error detection, particularly in identifying spelling and syntactic errors, when compared to four other software programs

studied. In comparison to human raters, Grammarly was successful in detecting a greater number of errors (Almusharraf & Alotaibi, 2022).

Due to its exceptional error detection in the study conducted by Sahu et al. (2020), Grammarly was employed as an assisting tool to detect verb errors in this study. The collected data was directly uploaded to the Grammarly Editor (<https://app.grammarly.com/>) and was analyzed quantitatively based on Grammarly's detection.

In addition to the research framework, it is important to review the studied groups as their characteristics and backgrounds are essential context for interpreting the research findings.

Teaching Generation Z and Generation Alpha

As labeled by McCrindle and Wolfinger (2014), Generation Z refers to a group of individuals who were born between 1995 to 2009. Generation Z's learners are highly flexible in their learning environment (Whitehead, 2023). They enjoy learning by doing rather than being told what to do. Apart from being active learners, Generation Z's learners recognize language skills as a necessary tool for effective functioning in the world (Astanina & Kuznetsov, 2020). For this reason, they prioritize understanding how the knowledge they gain applies to their everyday lives rather than impractical application. To illustrate, they are willing for more situational communicative activities as they find it more applicable to the real-world than book-oriented learning (Demir & Sönmez, 2021). Being the 'Digital Natives', computers are not technology, and the Internet is one of the necessities of life (Harmanto, 2013). Therefore, videos, smartphone applications, and online games such as Kahoot are preferred to computer and smart board as they are more attractive, enjoyable, and effective in learning language (Demir & Sönmez, 2021; Poláková & Klímová, 2019).

Following the Generation Z, McCrindle and Fell (2020) labeled the current young generation as 'Generation Alpha' who were born from the Millennials parents in between 2010 until the end of 2024. For this youngest generations, innovative teaching methods are desirable due to the rapid access to the overflowed information, whereas a traditional and rigid teaching method may hinder their engagement (Nagy & Kolcsey, 2017; Tofonao et al., 2020). Generation Alpha's learners prefer the use of visual, auditory, and kinesthetic tools in learning as they are easily distracted and have shorter attention span. According to Horvat and Kuzma-Kachur (2021), like the previous generation, learning becomes engaging and leads to better results for Generation Alpha when they understand its relevance to their lives and goals while unmotivated learners struggle to achieve proficiency in tasks. Apart from the practical application, studies by Khirzani et al. (2023) showed that Generation Alpha demonstrates increased focus and active use of English when surrounded by the language. They naturally seek interaction with native speakers for clarification and engage in peer-to-peer practice, highlighting their inclination towards self-directed learning. Even though they are familiar with autonomous learning habit, social interactive learning and collaborative learning also stimulate their learning process. More active and stimulating method, such as gamification of teaching, and metaverse gaming in education, such as Minecraft and Roblox, is likely to attract this generation better as it makes learning more fun, active, and engaging to motivate the learners (Jukić & Škojo, 2021;

McCrindle, 2024). Apart from that, according to Visaltanachoti et al. (2021), the use of recent artificial intelligence (AI) technology in education such as Amazon Alexa and Chatbots, helped the students in learning English speech. Also, the AI writing tool, such as Grammarly, were proven to be highly effective and were satisfied among Thai students. In terms of writing, the use of Canva and Padlet also help to improve fluency in writing and boost writing creativity (Ramadhani et al., 2023; Sari et al., 2023)

Although the two generations employ many similar language learning strategies, a difference in their learning approaches can be seen (Apaydin & Kaya, 2020). The study by Apaydin and Kaya (2020) involved twelve preschool teachers from private kindergartens, who reported that Generation Alpha uses the target language less than Generation Z. This is attributed to their heavy reliance on technology, which can restrict their exposure to traditional language learning methods and opportunities to practice the target language. In contrast, Generation Z demonstrated superior communication skills, being more receptive to advancements in language learning and interpersonal relationships. Even though Generation Alpha are exposed to screens more than social interactions, it improves their language skills (Soly et al., 2021).

The new generations learn differently from previous generations and to cope with the rapid changing world and preparing for the new generations, the new National Education Act was established in 1999 and it brought significant changes to ELT in Thailand. According to the Act, English become a compulsory subject from elementary to secondary levels (12 years in total) and more various educational approaches were encouraged to be adopted in the classrooms. One of the teaching methodologies specified in the new Act was the learner-centered approach; however, it was interpreted and adopted into classrooms differently as some teachers misunderstood the concept (Darasawang, 2007). Therefore, many concerns were expressed by the educators for proper training so that they can design the classroom practices according to learner-centered approach (Dueraman, 2013). In addition to the misconception, some Thai teachers of English were overloaded with work which resulted in fossilizing their teaching styles to rote-learning, teacher-centered classroom activities and using Thai as the medium of instructions (Noom-ura, 2013). To summarize, varied teaching methods have been promoted in Thailand, but its implementation faced challenges due to teacher misunderstandings, workload issues, and a persistence of traditional teaching methods.

METHODOLOGY

This study utilized an explanatory sequential mixed-methods approach incorporating both quantitative and qualitative methods. Quantitative method is conducted at the beginning, then the results are explained in more detail with qualitative data (Creswell, 2014). The reason why this method was employed is to clarify the findings from the initial phase to address any outliers that do not align completely with the collected data in quantitative part (Toyon, 2021).

Samples

Since this study focuses on Thai EFL learners from Generation Z and Generation Alpha, a purposive sampling was used to select the specific group of individuals. The student samples

were recruited from Thai high school students who were born between 1995 and 2009 (Generation Z), with 150 participants, and 2010 onwards (Generation Alpha), also with 150 participants, based on McCrindle and Wolfinger's (2014) and McCrindle and Fell's (2020) generation labels. This label was adopted as it has been commonly used to define the group of individuals in educational research (Apaydin & Kaya, 2020; Horvat & Kuzma-Kachur, 2021; Šramová & Pavelka, 2023). At that time of data collection, Generation Z students were in 10th grade, while Generation Alpha students were in 7th grade in different private schools outside Bangkok, Thailand. Both groups had varying levels of English proficiency and included learners from the standard Thai program, English Program, and English Gifted Program. The Standard Thai Program teaches students in Thai and follows the Thai national curriculum, whereas the English Program teaches most subjects in English and combines Thai and international curricula to foster bilingual proficiency. The English Gifted Program also employs English as the medium of instruction; however, it provides a more rigorous and advanced curriculum that is specifically tailored to academically gifted students. They are all Thai native speakers who study English as a foreign language.

Sample analyzed papers

A total of 300 written assignments, with 150 from each generation, produced during the academic year 2023, were analyzed to examine language errors made by Thai EFL learners from two different generations who studied in a private school (Generation Z) and a public school (Generation Alpha) outside Bangkok, Thailand. They were asked to complete during the fundamental English classes within the time limit (50 minutes). The samples included both fictional and non-fictional narrative writings, each with a minimum length of 100 words. The topics written by Generation Z were "My Perfect Gift" and "My Memorable Experience". For Generation Alpha, the topics were "My Favourite Vacation" and "Mermaid and Island". The Generation Z and Generation Alpha in this study were asked to write in termly and monthly basis, respectively. Technology was used during writing but with different amount. To illustrate, Generation Z's learners incorporated the use of iPad in some types of writing (i.e., e-mail) while Generation Alpha's learners often used Canva, Padlet, and PowerPoint to write a project.

Research framework

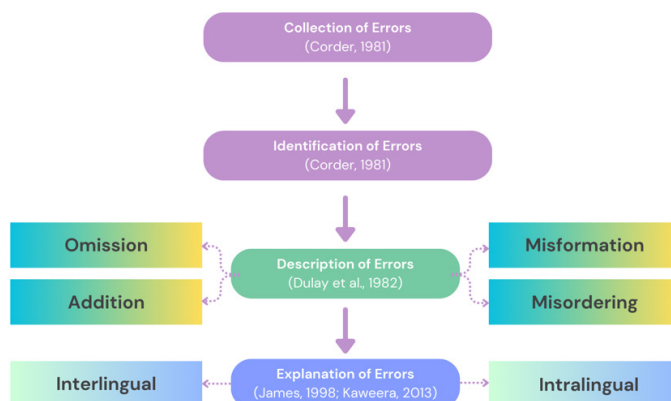


Figure 1 The framework of the study

To gather and analyze the data, the study employed four-step error analysis, adapted from Corder's (1974) original five-step approach, as it can be seen in Figure 1. Each step is thoroughly discussed below.

The collection of errors was the first step of the error analysis where the sample of the learner's languages was collected. According to Corder (1974), several significant points could be raised while collecting language samples, such as the techniques used, sample size, length of time, and more. The second step was the identification of errors. When identifying the errors, the target language used as a norm had to be decided to distinguish whether the collected data was an error or a mistake, or overt or covert. Also, the researcher had to decide if the analysis examined either correct or appropriateness deviations, or both. In the following step, description of errors, the errors collected were organized into categories based on Dulay et al.'s (1982) surface structure taxonomy. The last step was the explanation of errors where the errors were explained and interpreted as a reflection of how language was produced by the learners. Ellis (1997) stated that errors had many sources. They could be produced due to L1 transfer or faulty attempts in constructing languages. In this study, the sources of errors were explained based on James (1998), adapted from Kaweera's (2013) classification of sources of errors among Thai EFL learners.

Data collection

For the quantitative phase, the electronic form (.docx) of written assignments were collected and uploaded to Grammarly Editor (<http://app.grammarly.com>). Then, a verb error list was created to see the number of verb errors detected and asked to the experts to ensure accuracy.

For the qualitative phase, since the researcher of this study was not the one who directly interacted with the participants, a semi-structured interview was conducted with the instructors of both participants to obtain more insights and details of the qualitative data, such as the teaching methodologies, language used in the class, technology used during the lessons, and teaching materials, since the researcher of the study did not have a direct interaction with the participants in the classrooms.

Data analysis

The three remaining steps were followed in order to analyze the data in quantitative phase. In the stage of identifying errors, the data was analyzed based on the Standard English language rules in *Oxford Modern English Grammar* (Aarts, 2011). As this study focused on learners' errors, mistakes were not taken into account. Both covert and overt errors were analyzed as well as their deviations of correctness and appropriateness. After that, the errors were categorized based on Dulay et al.'s (1982) surface structure taxonomy. Once they were categorized into each taxonomy, the causes of errors were explained referred to James (1998) and Kaweera's (2013) sources of errors among Generation Z and Alpha's Thai EFL students. Then, for the qualitative phase, the semi-structured interview was recorded and transcribed to provide in-depth details of educational contexts from both generations.

FINDINGS

In this section, the findings are discussed in response to the two research questions: (1) What are the differences of types of verb errors found between the Generation Z's and Generation Alpha's Thai EFL learners? (2) What are the differences of sources of errors found between the Generation Z's and Generation Alpha's Thai EFL learners? Figure 2 and Figure 3 present the number of occurrences of errors produced by Generation Z and Generation Alpha. To fulfill the first research question, the number of errors from both generations were compared as it can be seen in Figure 4.

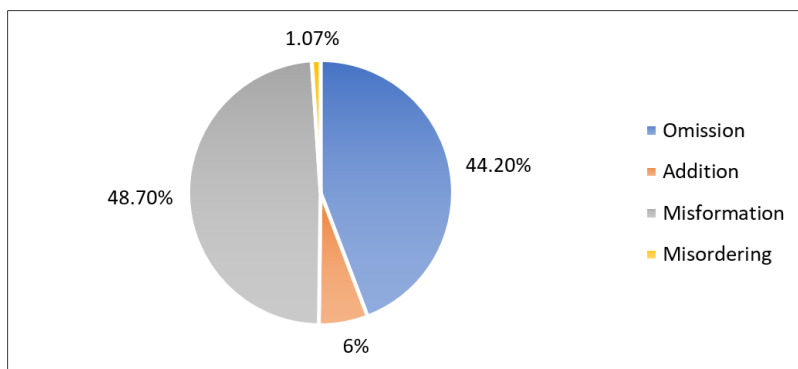


Figure 2 The number of occurrences of errors produced by Generation Z

Starting from Generation Z, 466 errors were detected in their writing assignments. The findings indicated that all four types of errors were produced, and the majority of the errors were misformation errors (206 items counted as 48.7%), followed by omission (227 items counted as 44.2%), addition (28 items counted as 6%), and misordering (5 items counted as 1.07%).

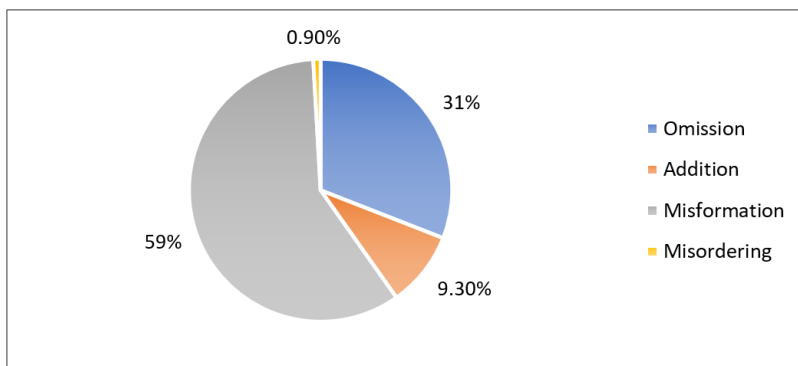


Figure 3 The number of occurrences of errors produced by Generation Alpha

For Generation Alpha, the total errors detected were 335 errors and all four different types of errors were found. The most frequently produced errors were misformation errors (197 items counted as 59%), followed by omission (104 items counted as 31%), addition (31 items counted as 9.3%) and misordering (3 items counted as 0.9%).

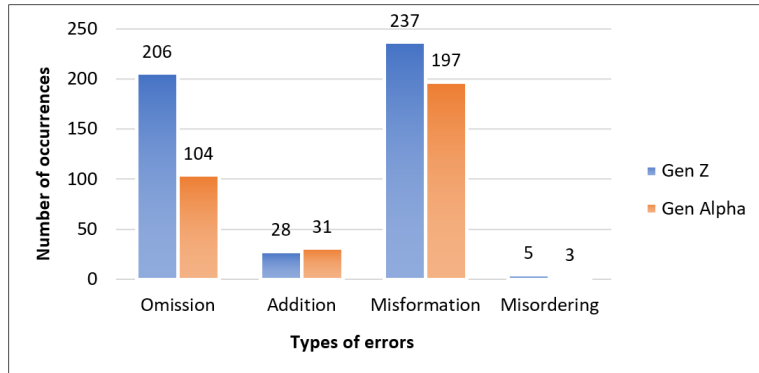


Figure 4 The comparisons of types of errors between Generation Z and Generation Alpha

To answer the first research question, the detected errors were classified into the types of verb errors based on Dulay et al. (1982)'s surface structure taxonomy and were compared between two generations in Figure 4. Upon analyzing the two data sets, several notable patterns emerge. Both generations produced the same order of frequency, with misformation being the highest, followed by omission, addition, and misordering. Besides, the most frequently produced misformation error by both generations was using present simple instead of past simple, such as 'After that he told me that he *feel* thankful for giving the gift [...]'. To express the past action, the word 'feel' should be corrected as 'felt'. Despite the similarity, Generation Z demonstrated a significantly elevated total frequency of verb errors in comparison to Generation Alpha, indicating a numerical increase of 111 items (28.1%). In addition to that, the differences of omission errors between Generation Z and Generation Alpha were 102 items (49.5%), which showed a notable difference between two generations. The most common omission errors made by Generation Z was omission of '-s' in a singular verb; for example, '[...] he always *make* me and people around me laugh [...]'. Since the subject is third person singular, 'make' should be corrected as 'makes'.

In order to respond to the second research question, the sources of errors from Generation Z and Generation Alpha were analyzed and were grouped into two different sources namely, interlingual and intralingual errors. Generation Z produced 370 interlingual errors (79.4%) and 96 intralingual errors (20.6%) whereas Generation Alpha produced 281 (83.1%) and 57 (16.9%), respectively. The findings from both generations and their comparisons were presented in Figure 5 and 6.

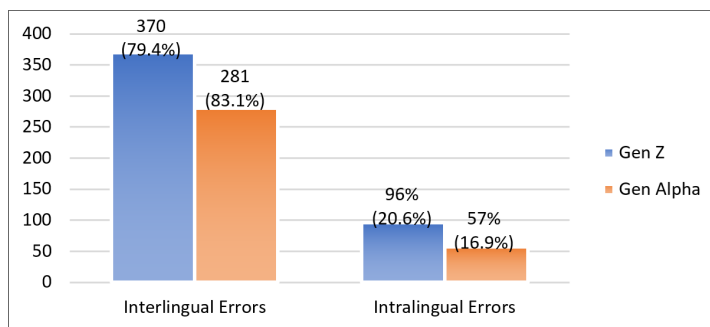


Figure 5 The number of sources of errors detected in the written assignments composed by Generation Z and Generation Alpha

According to Figure 5, more than half of errors produced by the Generation Z's learners in this study were due to the first language interference, which counted as 370 items out of 466 (79.3%). A noticeable distinction between Generation Z and Generation Alpha was apparent when considering the number of interlingual errors detected in the written assignments. The percentage difference was approximately 27.37% between Generation Z, consisting of 370 out of 466 errors (79.6%), and Generation Alpha, which comprised 281 items out of 338 (83.1%).

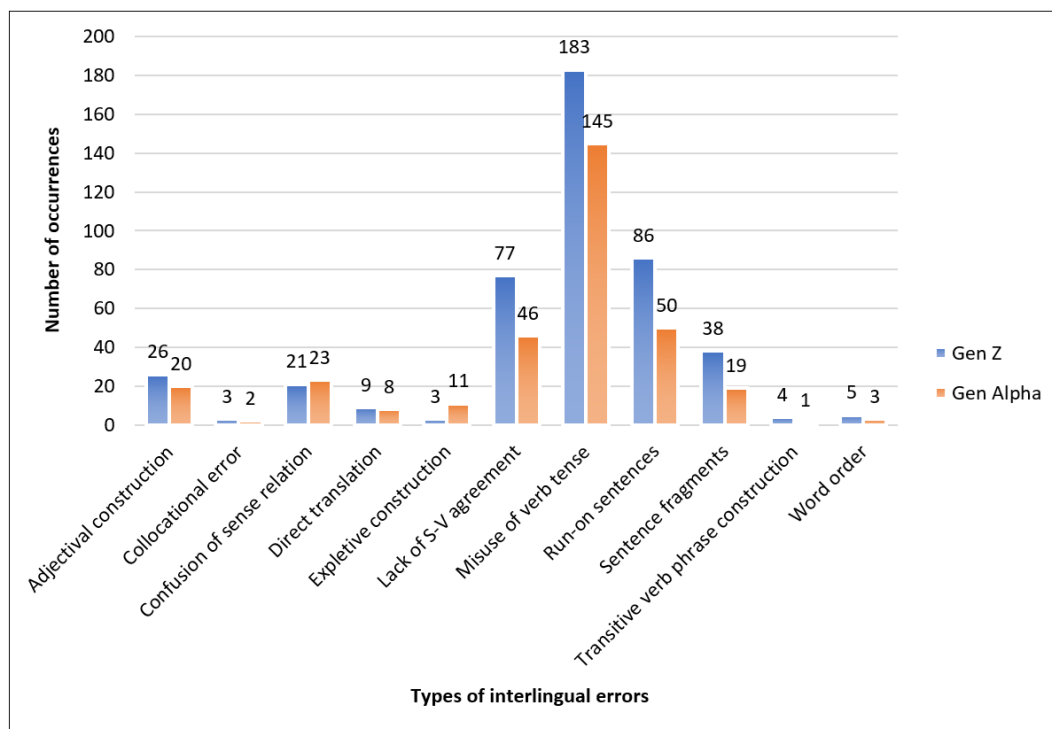


Figure 6 The comparisons of interlingual errors between Gngeneration Z and Generation Alpha

According to Figure 6, the interlingual errors can be categorized into 11 subtypes namely, adjectival construction, collocational error, confusion of sense relation, direct translation, expletive construction, lack of subject-verb agreement, misuse of verb tense, run-on sentences, sentence fragments, transitive verb phrase construction and word order.

For Generation Alpha, only 10 subtypes of interlingual were detected and the most frequently produced errors were misuse of verb tense (145 items, representing 52%), run-on sentences (50 items, representing 17.8%), and lack of subject-verb agreement (46 items, representing 16.4%) which were in line with the Generation Z's findings.

As it can be seen in Figure 6, only 10 types of interlingual errors out of 11 were detected among Generation Alpha which made a noticeable difference when contrasting the data of Generation Z and Generation Alpha. Even though the majority of interlingual errors were frequently produced by Generation Z, there were two sub types of errors, namely confusion of sense relation and expletive construction, were more frequently committed by Generation Alpha. For example, Generation Alpha's participants often directly translated the word from Thai to

English the word as in '[...] the company decided to *open* the song again [...]'. 'open' was used instead of 'play' or 'turn on' as 'open (เปิด)' can refer to 'play the music' in Thai. Apart from the direct translation of lexical element, the learners often use incorrect expletive construction such as 'They have' instead of 'There + be'. This is because 'have (มี)' in Thai can be used to show possession and existence.

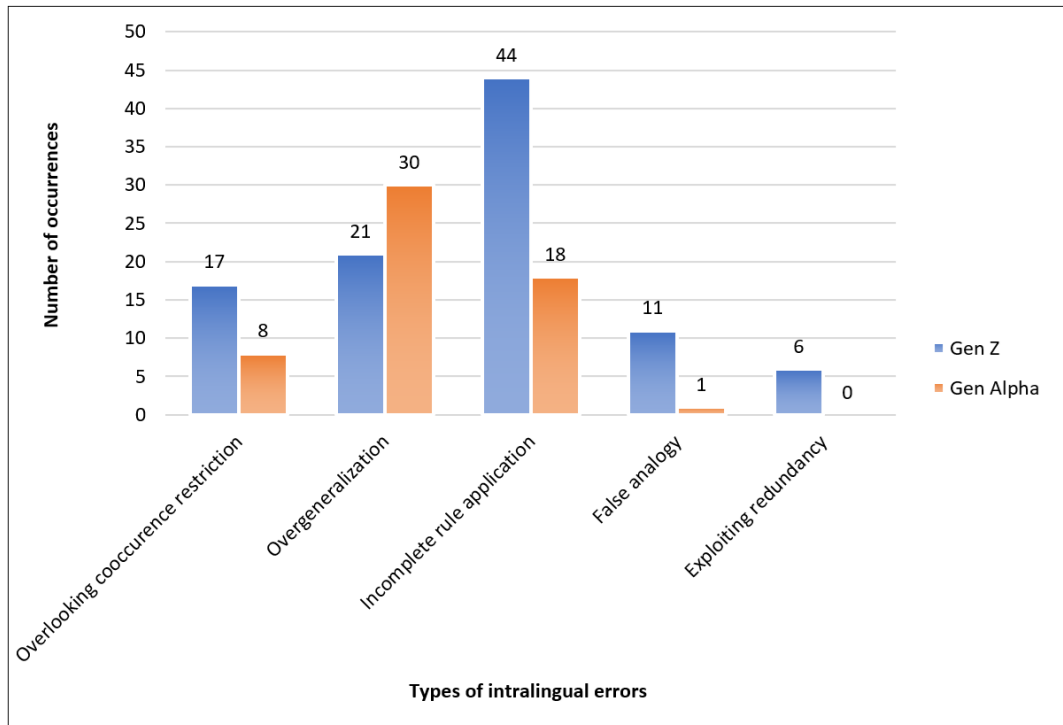


Figure 7 The comparisons of intralingual errors between Generation Z and Generation Alpha

Apart from the errors caused by the mother tongue interference, the faulty learning of the target language also impacted the way the participants of this study from both generations produced ill-formed sentences as it shown in Figure 7. Generation Z produced 96 items (20.6%) whereas 57 items (16.9%) were detected among Generation Alpha. Even though they were the minor errors in both generations, four subtypes of intralingual errors detected including overlooking cooccurrence restriction, overgeneralization, incomplete rule application, and false analogy. Generation Z in this study often applied incomplete rule to certain structures, and one of the explicit structures was the conditional sentences. They often placed incorrect form of verb tense in the if-clause and main clause as it can be seen in 'if our class doesn't have this boy, the class *would* be very quiet'. Instead of 'would', it had to be 'will' to express the possibility. Contrarily, Generation Alpha in this study struggled with overgeneralization. They often added unnecessary item, especially the verb 'be' along with the main verb: 'I'm feel very happy' and 'The bus *is* arrive at the school at 22.00 pm'.

In summary, Generation Z being studied produced most of the intralingual errors; however, Generation Alpha produced more overgeneralization errors, but no exploiting redundancy errors in this research.

DISCUSSION

The results of the study revealed a difference between Generation Z and Generation Alpha in terms of the patterns that emerged in the types of verb errors and sources of errors detected in their written assignments.

First, the study found that the frequency of omission errors between Generation Z and Generation Alpha revealed a difference with 102 occurrences. These findings align with those of several previous studies conducted by Promsupa et al. (2017) and Suvarnamani (2017), as omission errors were the most common type detected among Generation Z learners. The evident contrast in error frequency in this study indicates potential variation in the teaching approach adopted in the EFL classroom in each generation. Since most Generation Z were born between 1995 and 2009, and most of their teachers were born before a certain time, the common teaching method employed in the classroom is likely rote learning and often uses Thai as the medium of instruction (Noom-ura, 2013). Generation Z's teacher commented in a semi-structured interview that even though English was used at some point in the lesson, such as giving a direction of task, Thai was mainly used to explain the structures and vocabulary. This implies that Thai was still mostly used by the teacher in the classroom, which led to more error detection among Generation Z in this study. The response given in the interview aligned with Domingo's (2020) that an exposure to the target language can affect language learner's acquisition.

Apart from language exposure, a learner-centered approach was adopted in Generation Z's classroom, but with a few misconceptions. Even though the learner-centered approach, which provides more learner autonomy, has been introduced, most teachers in this generation were likely to misunderstand the concept and could not adopt it appropriately in the classroom (Darasawang, 2007). Generation Z's teacher explained that autonomy was given only during the writing activity; however, it was mainly book-oriented and teacher-centered in other parts of the lesson. In other words, Generation Z learners being studied were taught in a less student-centered classroom, where they were not provided with enough environment to be exposed to authentic learning. The teacher shared that the structures and vocabulary chosen in each lesson were fixed by the student's book; therefore, the classes were taught based on the fixed material. In addition, the teacher commented that many students do not find studying grammar or writing important because they are not applicable to their real life. These insights were consistent with Demir & Sönmez (2021) that Generation Z students are willing for more practical usage rather than material-oriented learning.

Apart from the types of errors, another significant difference found between the two generations in this study was the source of the verb errors. Although most errors for both generations were due to interlingual interference, several notable differences were observed.

First, Generation Z learners demonstrated a higher frequency of interlingual errors than Generation Alpha learners. In addition, 10 subtypes of errors (out of 12) were detected more frequently: adjectival construction, collocational error, direct translation, exploiting redundancy, lack of subject-verb agreement, misuse of verb tense, run-on sentences, sentence fragments,

verb phrase construction, and word order. The results corresponded to a previous study in which interlingual sources were the main cause of written errors by participants from this generation (Phetdannuea & Ngonkum, 2017). Generation Z's teacher elaborated that their students continuously produced the same errors, especially verb tense and subject-verb agreement, even though they were explained thoroughly in Thai. This interview data might imply the fossilization of language learning among studied group as they were not able to use them correctly despite rules having been instructed.

Despite the lower frequency of interlingual errors, Generation Alpha struggled with confusion regarding sense relations and expletive construction. For example, the students directly translated the sentences 'turn on the music' and 'turn off the song' to 'open the song' and 'close the song' as in Thai, /bpeert^L phlaehng^M/ and close /bpit^L phlaehng^M/ can be used to convey the meaning of playing and stopping the music. Moreover, the Alpha students frequently used 'have' instead of its correct form 'there + be' for the expletive construction. These errors may be attributed to the inability to distinguish between the L1 and L2 lexical meanings. It was remarked by the Generation Alpha's teacher that English was used most of the time to promote English speaking environments to the students which might have led to the negligence of explaining how two language systems can be different in lexical meanings. Therefore, they frequently applied what they could write in Thai to English without noticing linguistic exemptions because of their limited semantic competence in English (Kaweera, 2013).

Second, intralingual errors were also detected in both generations, which aligns with previous research that highlighted that faulty learning of the target language could also be a possible stem to Thai students' errors (Kampookaew, 2020; Sermsook et al., 2017). Similar to prior findings, Generation Z learners produced more intralingual errors compared to Generation Alpha, with incomplete rule application being the most frequent, followed by overlooking co-occurrence restriction, false analogy, and exploiting redundancy. The findings implied that the learners were not able to employ the accurate structures of the target language because of their faulty or partial knowledge of English. The Generation Z teacher stated that due to the large number of students, proper individual feedback in writing class was not given to the students as it was time-consuming. Thus, learners were not able to acknowledge the errors they made because of not receiving writing feedback individually.

Conversely, Generation Alpha demonstrated a different rank of common errors, particularly those caused by over-generalization. Such a situation can arise if the teacher allows learners to have full control over their learning experience without proper monitoring. The Generation Alpha's teacher stated that younger learners were assigned to complete the assignments by themselves if they were not too complicated. This insight suggests that giving full autonomy, especially to younger students, might lead to a negligence of notable exceptions in the L2 system and constant application of faulty knowledge.

In conclusion, the findings indicate that Generation Alpha demonstrated a better understanding of the L2 system and exhibited a greater ability to apply L2 rules accurately. One possible explanation for this is how they learn English in the classroom. The Generation Alpha's teacher stated that they mostly teach English with project-based learning and question-based learning

in read and write subjects and promote English speaking environments to the students even though the subject is taught by Thai teacher. This qualitative finding contributes to the notion by Khirzani et al. (2016) that students were more focused and use English actively when instructed by the Communicative Language Teaching (CLT) method. Additionally, the Alpha's teacher mentioned that technology-based learning was promoted during writing classes by incorporating Canva, Padlet, and PowerPoint. As mentioned by Ramadhani (2023) and Sari et al. (2023), younger learners performed better in writing with the use of mentioned applications. It is speculated that they demonstrate a greater ability to understand the concepts of the target language due to increased exposure to L2.

CONCLUSION

This study provided empirical evidence on the types of verb errors and their sources made by Generation Z and Generation Alpha's Thai EFL students. The findings of this study results encourage ongoing investigation and adjustment to cater to the requirements of upcoming learner generations. The data clearly shows that Thai EFL learners of both Generation Z and Generation Alpha in this study commonly struggle with verb tense errors, run-on sentences, and subject-verb agreement issues; therefore, an appropriate teaching method, varies according to the generations, can be employed to tackle with the problems. For Generation Z, it becomes evident that they should be more exposed to English to foster linguistic development. Thus, language instruction in the classroom should prioritize practical application over textbook-oriented approaches, facilitating more practical learning opportunities. Furthermore, individualized feedback is essential to correct repeated verb errors. Conversely, for Generation Alpha, a balance between L1 and L2 is important to distinguish two language systems, especially the lexical meanings.

Regarding the study's limitations, this study is a case study with a limited sample size and participants with varying levels of English proficiency. Additionally, the topics of the written assignments and the total number of hours spent on English-related environments were varied which may limit the generalizability of the results to all Thai EFL learners from Generation Z and Generation Alpha. For future research, it is recommended that samples be collected from participants who have been exposed to the same level of English instruction and environment, and write on the same topics, ensuring they have similar English backgrounds.

THE AUTHORS

Yuki Takahashi is an M.A. student in English at the Faculty of Humanities, Srinakharinwirot University, Thailand. She received her bachelor's degree in English from Chiang Mai University, Thailand. Her research interests include EFL, and English language learning and teaching.

yuki.takahashi@g.swu.ac.th

Narathip Thumawongsa is the Chair of the M.A. in English program at the Faculty of Humanities, Srinakharinwirot University, Thailand. She received her doctorate and master's degree in Language and Communication from the National Institute of Development Administration (NIDA). Her research interests include English language learning and intercultural communication.

narathip@g.swu.ac.th

REFERENCES

- Aarts, B. (2011). *New Oxford modern English grammar*. Oxford University Press. <https://lib.pardistalk.ir/library/Oxford-Modern-English-Grammar.pdf>
- Al-Ahdal, A. (2020). Using computer software as a tool of error analysis: Giving EFL teachers and learners a much-needed impetus. *International Journal of Innovation, Creativity and Change*, 12(2), 418–437. <https://ssrn.com/abstract=3570619>
- Almusharraf, N., & Alotaibi, H. (2022). An error-analysis study from an EFL writing context: Human and automated essay scoring approaches. *Technology, Knowledge and Learning*, 28, 1015–1031. <https://doi.org/10.1007/s10758-022-09592-z>
- Amnuai, W. (2020). An error analysis of research project abstracts written by Thai undergraduate students. *Advances in Language and Literary Studies*, 11(4), 13–20. <https://journals.aiac.org.au/index.php/all/article/view/6396>
- Astanina, A., & Kuznetsov, I. (2020). Linguistic imperialism in EFL teaching: New role of a teacher in educating Generation Z. *Proceedings of the International Scientific Conference on Philosophy of Education, Law and Science in the Era of Globalization (PELSEG 2020)*, 447, 16–20. <https://doi.org/10.2991/assehr.k.200723.004>
- Apaydin, Ç., & Kaya, F. (2020). An analysis of the preschool teachers' views on Alpha generation. *European Journal of Education Studies*, 6(11), 123–141. <https://doi.org/10.5281/zenodo.3627158>
- Brown, H. D. (2007). *Principles of language and teaching* (5th ed.). Pearson Education.
- Burton-Roberts, N. (2011). *Analysing sentences: An introduction to English syntax* (3rd ed.). Pearson Education Limited. <https://langfaculty-aden.com/books/1/master/1.pdf>
- Corder, S. P. (1967). The significance of learner's errors. *International Review of Applied Linguistics in Language Teaching*, 5(4), 161–170.
- Corder, S. P. (1974). Error analysis, interlanguage and second language acquisition. *Language Teaching*, 8(4), 201–218. <https://doi.org/10.1017/S0261444800002822>
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). SAGE Publications.
- Darasawang, P. (2007). *English language teaching and education in Thailand: A decade of change*. Cambridge Scholars Publishing.
- Debora, N. (2018). *An analysis of grammatical errors in writing paragraph made by eleventh grade students of accounting in SMK N 1 Jambi academic year 2017/2018* [Unpublished master's thesis]. Batanghari University.
- Deerajviset, P. (2022). Research trends in the use of technology in English language education in ASEAN. *Journal of Mekong Societies*, 18(2), 76–104. <https://so03.tci-thaijo.org/index.php/mekongjournal/article/view/261369>
- Demir, B., & Sönmez, G. (2021). Generation Z students' expectations from English language instruction. *Journal of Language and Linguistic Studies*, 17(1), 683–701. <https://www.jlls.org/index.php/jlls/article/view/2253>
- Domingo, M. G., & Garganté, A. B. (2016). Exploring the use of educational technology in primary education: Teachers' perception of mobile technology learning impacts and applications' use in the classroom. *Computers in Human Behavior*, 56, 21–28. <https://doi.org/10.1016/j.chb.2015.11.023>

- Dueraman, B. (2013). Focus on Thai learners of English: Their self-reports about foreign language learning. *International Research Journal of Arts and Social Sciences*, 2(7), 176–186. <https://www.interestjournals.org/articles/focus-on-thai-learners-of-english-their-selfreports-about-foreign-language-learning.pdf>
- Dulay, H., Burt, M., & Krashen, S. (1982). *Language two*. Oxford University Press.
- Ellis, R. (1994). *The study of second language acquisition*. Oxford University Press.
- Ellis, R. (1997). *Second language acquisition*. Oxford University Press.
- Fitria, R., Sabarun, S., & Miftah, M. Z. (2022). Students' perception of the use of Grammarly in undergraduate thesis writing. *PROJECT (Professional Journal of English Education)*, 5(2), 366–371. <https://doi.org/10.22460/project.v5i2.p366-371>
- Gass, S. M., & Selinker, L. (2008). *Second language acquisition: An introductory course* (3rd ed.). Routledge.
- Hakiki, G. N. R. (2021). Perception of EFL students on the use Grammarly application in writing class. *Eduvelop: Journal of English Education and Development*, 4(2), 99–106. <https://doi.org/10.31605/eduvelop.v4i2.891>
- Harmanto, B. (2013). Teaching English to generation Z students (New concept of young learners). In H. Margana & P. Ari (Eds.), *Bringing the 2013 curriculum to light* (pp. 74–81). UNY Press. <http://eprints.umpo.ac.id/1752/>
- Helmiyadi. (2018). An error analysis of students' grammar in writing: A mix method at Darul Ulum, a private Islamic boarding senior high school in Lhokseumawe. *Getsempena English Education Journal*, 5(2), 65–73. <https://ejournal.bbg.ac.id/geej/article/view/828>
- Horvat, M. V., & Kuzma-Kachur, M. I. (2021). Professional activity of an elementary school teacher with students of the alpha generation. *Scientific Bulletin of Mukachevo State University Series "Pedagogy and Psychology"*, 7(1), 26–35. [https://doi.org/10.52534/msu-pp.7\(1\).2021.26-35](https://doi.org/10.52534/msu-pp.7(1).2021.26-35)
- Ismawati, I., Akib, E., & Muhsin, A. (2021). How errors made in essay writing: An analysis using Grammarly software in EFL students. *IDEAS: Journal on English Language Teaching and Learning, Linguistics and Literature*, 9(1), 365–375. <https://ejournal.iaipalopo.ac.id/index.php/ideas/article/view/1815/1432>
- James, C. (1998). *Errors in language learning and use*. Routledge.
- Jenwitheesuk, T. (2009, August 23-29). *A study of persisted syntactic errors in writing of the 3rd year students of English for international communication program* [Paper presentation]. International Conference on the Role of Universities in Hands-On Education, Chiang Mai, Thailand. <https://www.thaiscience.info/Article%20for%20ThaiScience/Article/61/10018721.pdf>
- Jukić, R., & Škojo, T. (2021). The educational needs of the alpha generation. In K. Skala (Ed.), *2021 44th International Convention on Information, Communication and Electronic Technology (MIPRO)* (pp. 564–569). Mipro. <https://ieeexplore.ieee.org/document/9597106>
- Kampookaew, P. (2020). An analysis of grammatical errors made by Thai EFL university students in an EAP writing class: Issues and recommendations. *rEFlections*, 27(2), 246–273. <https://doi.org/10.61508/refl.v27i2.248862>
- Kaweera, C. (2013). Writing error: A review of interlingual and intralingual interference in EFL context. *English Language Teaching*, 6(7), 9–18. <https://doi.org/10.5539/elt.v6n7p9>
- Khatter, S. (2019). An analysis of the most common essay writing errors among EFL Saudi female learners (Majmaah University). *Arab World English Journal (AWEJ)*, 10(3), 364–381. <https://doi.org/10.24093/awej/vol10no3.26>
- Khizrani, A. F., Yin, S. S. Y., Said, N. M., Singh, R. K. S. P., & Hashim, H. (2023). Examining language learning strategies (LLS) through the lens of Gen Alpha ESL learners. *International Journal of Academic Research in Business & Social Sciences*, 13(7). <https://doi.org/10.6007/ijarbss/v13-i7/17755>
- Kongkapet, N. (2007). *Effects of web-based English reading instruction using project-based language learning on reading comprehension ability of Phetchaburi Rajabhat University students* [Unpublished master's thesis]. Chulalongkorn University.
- Köpfer, P. (2022). Teachers' perspectives on dealing with students' errors. *Frontier in Education*, 7, Article 868729. <https://doi.org/10.3389/feduc.2022.868729>

- Kulsirisawad, P. (2014). Coming to understand Thai EFL student writers' problems with verb related errors. *Manusats Paritat: Journal of Humanities*, 36(1), 17–28. <https://ejournals.swu.ac.th/index.php/hm/article/view/4277>
- Liu, X., Wang, M., Zhang, L., & Zhou, M. (2022). Intralingual errors in grammatical aspects of Chinese university L2 learners' compositions. *Proceedings of the 2022 3rd International Conference on Language, Art and Cultural Exchange (ICLACE 2022)*, 673, 751–756. <https://www.atlantis-press.com/proceedings/iclace-22/125976206>
- McCrindle. (2024). *Gen Z and Gen Alpha infographic update*. Retrieved October 20, 2023 from <https://mccrindle.com.au/article/topic/generation-z/gen-z-and-gen-alpha-infographic-update/>
- McCrindle, M., & Wolfinger, E. (2014). *The ABC of XYZ: Understanding the global generations* (3rd ed.). McCrindle Research Pty Ltd. https://www.saspa.com.au/wp-content/uploads/2016/02/The-ABC-of-XYZ_Chapter-1.pdf
- McCrindle, M., & Fell, A. (2020). *Understanding Generation Alpha*. McCrindle Research Pty Ltd. <https://generationalalpha.com/wp-content/uploads/2020/02/Understanding-Generation-Alpha-McCrindle.pdf>
- Nagy, Á., & Kölcsey, A. (2017). Generation alpha: Marketing or science. *Acta Educationis Generalis*, 7(1), 107–115. <https://doi.org/10.1515/atd-2017-0007>
- Nonkukhetkhong, K. (2013). Grammatical error analysis of the first year English major students, Udon Thani Rajabhat University. *The Asian Conference on Language Learning 2013 – Official Conference Proceedings, 2013*, 117–126. https://papers.iafor.org/submissionacll2013_0068/
- Noom-ura, S. (2013). English-teaching problems in Thailand and Thai teachers' professional development needs. *English Language Teaching*, 6(11), 139–147. <https://doi.org/10.5539/elt.v6n11p139>
- Nur Fitria, T. (2021). "Grammarly" as AI-powered English writing assistant: Students' alternative for English writing. *Metathesis Journal of English Language Literature and Teaching*, 5(1), 65–78. <https://doi.org/10.31002/metathesis.v5i1.3519>
- Patarapongsanti, A., Thongsan, N., C., Sukrutrit, P., Para, C., & Saphanuchart, N. (2022). An analysis of errors in business-oriented written paragraphs of the Thai EFL undergraduates. *English Language Teaching*, 15(7), 136–148. <https://doi.org/10.5539/elt.v15n7p136>
- Phetdannuea, F., & Ngonkum, S. (2017). An analysis of interlingual errors and intralingual errors in Thai EFL students' writing at Khon Kaen University. *KKU Research Journal Humanities and Social Sciences*, 4(2), 35–51. <https://so04.tci-thaijo.org/index.php/gskkuhs/article/view/99525>
- Phoocharoensil, S. (2022). ELT and AL research trends in Thai SCOPUS-indexed journals. *PASAA Journal*, 64, 163–193. <https://www.culi.chula.ac.th/en/pasaa/view/2>
- Phuket, P. R. N., & Othman, N. B. (2015). Understanding EFL students' errors in writing. *Journal of Education and Practice*, 6(32), 99–106. <https://iiste.org/Journals/index.php/JEP/article/view/27322>
- Poláková, P., & Klímová, B. (2019). Mobile technology and Generation Z in the English language classroom – a preliminary study. *Education Sciences*, 9(3), Article 203. <https://doi.org/10.3390/educsci9030203>
- Pongpairaj, N. (2019). Thai university undergraduates' errors in English writing. *Language and Linguistics*, 20(2), 66–99. <https://so04.tci-thaijo.org/index.php/joling/article/view/180716>
- Pongsukvajchakul, P. (2019). Error analysis in English paragraph writings of Thai university students. *Udon Thani Rajabhat University Journal of Humanities and Social Science*, 8(2), 141–155. <https://so06.tci-thaijo.org/index.php/hsudru/article/view/187684>
- Pratama, Y. D. (2020). The investigation of using Grammarly as online grammar checker in the process of writing. *English Ideas: Journal of English Language Education*, 1(1), 46–54. <https://journal.unsika.ac.id/index.php/IDEAS/article/view/4180>
- Promsupa, P., Varasarin, P., & Brudhiprabha, P. (2017). An analysis of grammatical errors in English writing of Thai university students. *HRD Journal*, 8(1), 93–104. <https://ojs.lib.buu.ac.th/index.php/hrd/article/view/5587>

- Putamata, J. (2011). An error analysis of Thai writing of third year Thai-major exchange students from Department of Asian Languages and Culture, Guangdong University of Foreign Studies in 2009. *Journal of Korean Association of Thai Studies*, 18(1), 189–205. https://www.kci.go.kr/kciportal/landing/article.kci?arti_id=ART001585444
- Ramadhani, A. S., Dewi, U., Syahnaz, M., & Kihwele, J. K. (2023). The effectiveness of using Padlet in collaborative writing based on students' perceptions. *Child Education Journal*, 5(1), 36–48. <https://doi.org/10.33086/cej.v5i1.3767>
- Rao, M., Gain, A., & Bhat, S. (2019). Usage of Grammarly – Online grammar and spelling checker tool at the health sciences library, manipal academy of higher education, manipal: A study. *Library Philosophy and Practice (e-Journal)*, 2019, Article 2610. <https://digitalcommons.unl.edu/libphilprac/2610/>
- Richards, J. C. (1971). A non-contrastive approach to error analysis. *ELT Journal*, 25(3), 204–219. <https://doi.org/10.1093/elt/xxv.3.204>
- Richards, J. C., & Schmidt, R. (2010). *Longman dictionary of language teaching and applied linguistics* (4th ed.). Pearson Education Limited.
- Sahu, S., Vishwakarma, Y., Kori, J., & Thakur, J. (2020). Evaluating performance of different grammar checking tools. *International Journal of Advanced Trends in Computer Science and Engineering*, 9(2), 2227–2233. <https://doi.org/10.30534/ijatcse/2020/201922020>
- Šramová, B., & Pavelka, J. (2023). Generation Alpha media consumption during COVID-19 and teachers' standpoint. *Media and Communication*, 11(4), 227–238. <https://doi.org/10.17645/mac.v11i4.7158>
- Sari, E. M. P. (2016). Interlingual errors and intralingual errors found in narrative text written by EFL students in Lampung. *Jurnal Penelitian Humaniora*, 17(2), 87–95. <https://doi.org/10.23917/humaniora.v17i2.2501>
- Sari, I. K. S., Rahayu, A., & Darmawati, Y. P. (2023). Using Canva to improve the creativity of elementary school students grade 5 in Yogyakarta. *Proceedings of International Conference on Teacher Profession Education*, 1(1), 656–670. <https://seminar.ustjogja.ac.id/index.php/ICoTPE/article/view/887/565>
- Sattayatham, A., & Somchoen, H., Jr. (2007). Medical students' most frequent errors at Mahidol University, Thailand. *The Asian EFL Journal*, 9(1), 170–194. <https://www.asian-efl-journal.com/main-editions-new/medical-students-most-frequent-errors-at-mahidol-university-thailand/index.htm>
- Seddik, M. (2023). Error analysis in EFL students' writing skill. *Journal of English Language Teaching and Applied Linguistics*, 5(4), 163–172. <https://doi.org/10.32996/jeltal.2023.5.4.16>
- Sermsook, K., Liamnimitr, J., & Pochakorn, R. (2017). An analysis of errors in written English sentences: A case study of Thai EFL students. *English Language Teaching*, 10(3), 101–110. <https://doi.org/10.5539/elt.v10n3p101>
- Solihat, D., & Novianti, D. (2015). Error analysis of writing verbs in discussion text. *ENGLISH REVIEW: Journal of English Education*, 4(1), 75–81. <https://doi.org/10.25134/erjee.v4i1.309>
- Suvarnamani, S. (2017). A study of grammatical and lexical errors in descriptive writing of first year arts students at Silapakorn University. *Silapakorn University Journal of Social Sciences, Humanities, and Arts*, 17(2), 239–264. <https://doi.org/10.14456/sujsha.2017.3>
- Soly, N., Benny, K., & Thomas, M. R. (2021). Technological perspectives of education for Generation Z and Generation Alpha. *Utkal Historical Research Journal*, 34(3), 153–169. https://www.researchgate.net/publication/353345012_TECHNOLOGICAL_PERSPECTIVES_OF_EDUCATION_FOR_GENERATION_Z_AND_GENERATION_ALPHA
- Toyon, M. A. S. (2021). Explanatory sequential design of mixed methods research: Phases and challenges. *International Journal of Research in Business and Social Science*, 10(5), 253–260. <https://doi.org/10.20525/ijrbs.v10i5.1262>
- Vazariah, U., & Rozimela, Y. (2020). An error analysis on verb usage in the texts written by EFL senior high school students. *Journal of English Language Teaching*, 9(1), 231–240. <https://ejournal.unp.ac.id/index.php/jelt/article/view/108152>

- Visaltanachoti, C., Viriyavejakul, C., & Ratanaolarn, T. (2021). Teaching English to Thai students using an artificial intelligence technology algorithmic model: A prototype analysis. *Turkish Journal of Computer and Mathematics Education (TURCOMAT)*, 12(14), 5623–5630. <https://turcomat.org/index.php/turkbilmat/article/view/11718>
- Watcharapunyawong, S., & Usaha, S. (2013). Thai EFL students' writing errors in different text types: The interference of the first language. *English Language Teaching*, 6(1), 67–78. <https://doi.org/10.5539/elt.v6n1p67>
- Whitehead, E. (2023). Augmented skills of educators teaching generation Z. *Excellence in Education Journal*, 12(1), 32–54. <https://www.excellenceineducationjournal.org/wp-content/uploads/2023/01/EEJwinter2023.pdf>
- Wijayanti, S. D., Sumarta, S., & Rahmawati, M. (2021). Teachers' perception on the effectiveness using Grammarly as a tool for writing assessment. *LINGUISTIK: Jurnal Bahasa dan Sastra*, 6(2), 342–355. <http://jurnal.um-tapsel.ac.id/index.php/Linguistik/article/view/4205>
- Wongpattanakit, K. (2006). *Effects of a web-based English reading instruction program based on the cognitive academic language learning approach on pre cadets' reading comprehension ability and reading strategies* [Unpublished master's thesis]. Chulalongkorn University.