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Decoding Speaking Mindsets of Thai Undergraduates using Q-Methodology

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Abstract

Speaking English remains a persistent challenge in the English as a Foreign Language (EFL) context, specifically in Thailand. This study investigated the perspectives that constitute a speaking language mindset among Thai undergraduate students. This research employed Q-methodology to systematically explore the beliefs of 19 Thai undergraduate students toward foreign language speaking. The participants individually sorted and ranked statements related to foreign language speaking mindset, their responses were analyzed to identify distinct perspectives, including contradictory beliefs. The analysis revealed three primary perspectives: (1) effort and practice as key to improving foreign language speaking ability, (2) self-regulatory tendencies from the appraisal of talent and effort, and (3) discomfort and communication apprehension in classroom settings. The findings suggested that Thai undergraduate students shared a common perspective on effort value, mastery goal orientation, and feedback. The three perspectives pointed out that cultural value, self-perception, and emotional challenges significantly influenced foreign language speaking mindset and language learning experiences. The study highlighted the importance of fostering a supportive learning environment and addressing emotional barriers to enhance students' foreign language speaking ability in a Thai science-and-technology university. Additionally, the study demonstrated the utility of Q-methodology as a productive tool for uncovering learners' perspectives in underrepresented educational context.

Keywords: language mindset, domain-specific mindset, Q method, EFL context

Speaking proficiency is widely recognized as one of the most challenging aspects of language acquisition. Unlike receptive skills such as listening and reading, speaking requires real-time interaction, cultural awareness, and spontaneous language production (Aizawa et al., 2020; Chema et al., 2023). These demands make speaking particularly susceptible to psychological factors, including anxiety, self-efficacy, and willingness to communicate (Derakhshan & Fathi, 2024; Kalra & Siribud, 2020; Zarrinabadi et al., 2023). The complexity

of speaking a foreign language underscores the significance of learners' mindsets. Linguistic factors, such as grammar, play a critical role, as students often struggle to recall and apply grammatical structures accurately in spontaneous speech (Uyen & Dieu, 2023). Learners with a fixed mindset tend to view errors as indicators of failure, leading them to avoid speaking activities due to fear of negative evaluation (Oktriyani et al., 2024). Conversely, learners with a growth mindset perceive difficulties as opportunities for improvement, fostering resilience and reducing anxiety (Nadia et al., 2023).

Mindset has emerged as a critical determinant of speaking performance, particularly in public speaking contexts. Research indicates that individuals with a growth mindset exhibit higher levels of engagement, enjoyment, and confidence when delivering speeches (Stewart et al., 2019). However, the relationship between mindset and foreign language speaking anxiety is complex. While a growth mindset reduces general speaking anxiety, its impact in foreign language contexts is moderated by linguistic and psychological challenges (Ozdemir & Papi, 2022). For instance, students with a growth mindset are better at regulating negative emotions and demonstrating resilience, whereas those with a fixed mindset experience heightened anxiety and avoidance behaviors (Ozdemir & Papi, 2022). These findings highlight the importance of mindset interventions in language education to reduce anxiety and improve oral proficiency.

While many studies examined mindset in second language speaking, there is limited evidence on the patterned of foreign language speaking mindset and mindset meaning system in Thai EFL classroom, especially as revealed through Q-methodology (Janudom, 2023). Grounded in Dweck's (2006) mindset theory, the concept of language mindset has gained attention in second language acquisition research (Lou & Noels, 2019b). While quantitative studies have provided insights into learners' implicit beliefs, they often simplify the construct by categorizing learners into rigid growth or fixed mindset classifications, overlooking the dynamic nature of individual experiences (Thayati et al., 2024). Alternative methodological approaches, such as Q-methodology, are needed to capture the complexity of mindset in specific communicative contexts, as mindset is both individually constructed and socially shared within particular groups.

Within science and technology-oriented universities, where most of the students are not English majors, English is treated as a tool for accessing technical texts rather than personal or expressive communication (Wongkumsai, 2023). Understanding how Thai undergraduate students perceive their ability to improve speaking skills offers valuable insights into the interplay between mindset, learning context, and language development. To address these gaps, this study employs Q-methodology, an approach that captures individuals' subjective viewpoints and identifies shared patterns of thought among learners.

This method is well suited to the study of speaking mindset, as it involves learners' beliefs, emotional experiences, and self-perceptions about their language learning. This approach encourages careful engagement with the topic and supports the identification of common perspectives across individuals (Irie et al., 2018). Contextually, this study specifies how speaking mindset is shaped in a Thai science-and-technology university where students commonly endorse effort, and, simultaneously, anticipate negative judgment which can lead to avoidance in speaking tasks. These viewpoints are context-bound and intended to be adapted to comparable classrooms, rather than generalized statistically. Theoretically, this study highlights an effort-threat gap, defined as effort beliefs co-existing with anxiety, which clarifies when effort fails to translate into mastery-approach behavior. Practically, the study demonstrates the utility of Q-methodology for capturing layered, internally inconsistent learner beliefs in research on speaking mindset. This study seeks to answer: What are the underlying perspectives that constitute foreign language speaking mindset among Thai undergraduate students?

Literature Review

Language Mindset

Language mindset has been conceptualized as a cognitive subsystem which encompasses beliefs about one's language learning abilities and their influence on psychological constructs (Lou & Noels, 2019a). Traditionally, mindset has been measured as a dichotomy, comprising growth and fixed mindsets (Yeager & Dweck, 2020). A growth mindset reflects the belief that language abilities can improve through effort (Ryan & Mercer, 2012). Students with a growth mindset value effort, set mastery-oriented goals, view failures as learning opportunities, and manage negative emotions effectively (Li et al., 2024; Lou & Noels, 2019a). In contrast, a fixed mindset refers to the belief that language abilities are static, leading students to prioritize talent, set performance-oriented goals, and struggle with self-regulation and emotional control (Li et al., 2024; Lou & Noels, 2019a).

Despite the widespread use of dichotomy perspectives, inconsistencies in findings have ignited debates about whether mindset theory adequately captures connections between mindset constructs and variables like talent reliance, persistence, and goal orientations (Burgoyne et al., 2020; Yao et al., 2021; Zarrinabadi et al., 2023). These debates have broadened the scope of mindset research, encouraging exploration beyond traditional frameworks. Subsequent studies have linked language mindset to factors such as effort, attribution, goal orientations, and emotional tendencies (Bai & Wang, 2023; Khajavy et al., 2020).

To account for this complexity, Lou and Noels (2019a) demonstrated that the language mindset subsystem connects mindset to motivational factors. This model was supported by later research (Eren & Rakıcıoğlu-Söylemez, 2023; Guan et al., 2024). For instance, Growth-mindset students value effort and attribute success to it, while fixed-mindset students anticipate failure and reduce effort (Blackwell et al., 2007; Guan et al., 2024). Growth-mindset students also set mastery goals and adapt to challenges, whereas fixed-mindset students set performance goals and show less enthusiasm for problem-solving (Chen & Wong, 2015; Sadeghi et al., 2021; Yao & Zhu, 2024). Growth-mindset students exhibit lower foreign language anxiety and better emotional regulation (Altunel, 2019; Lou & Noels, 2019a; Sato, 2022).

While it is undeniable that dichotomous views have advanced research on language mindset, recent empirical evidence suggests the need to include a multifaceted view in studying students' mindset, as profiles of students who do not fit neatly into both areas have emerged (Lou et al., 2022). The exploration of mindset alongside dichotomy perspectives suggests alternative ways to understand language mindset. An inclusive perspective, based on students' subjective viewpoints rather than quantitative tools, could provide deeper insights and explain inconsistent findings. In response to this shift, the present study employed Q-methodology to investigate students' perspectives on language mindset, specifically within the speaking domain.

Language Mindset Specific to Speaking Domain

Building on the concept of domain-specific language mindsets, learners often hold distinct beliefs and attitudes toward different language skills. Mercer and Ryan (2010) highlighted this phenomenon, showing that students can exhibit varying mindsets depending on the specific language domain. For instance, a learner might embrace a growth mindset in vocabulary learning while holding a fixed mindset toward speaking. This domain-specific perspective has been supported by empirical studies, confirming that language mindsets are multifaceted and context-dependent.

Within this framework, speaking mindset emerges as a critical area of study, reflecting learners' beliefs about their ability to improve oral communication skills through effort and practice. To explore speaking mindset further, it is important to examine its role in language learning and its impact on learners' behaviors and outcomes. Nordin and Broeckelman-Post (2019) introduced mindset theory into communication research, revealing that a growth mindset positively correlates with public speaking performance and

engagement, while negatively correlating with public speaking anxiety. Similarly, Stewart et al. (2019) found that students with a growth mindset experienced lower apprehension and higher self-perceived competence in public speaking.

In second language learning, Ozdemir and Papi (2022) explored the relationship between mindset and speaking anxiety, finding that individuals with a fixed mindset experienced higher anxiety than those with a growth mindset. Nadia et al. (2023) identified five key aspects of a growth mindset in overcoming speaking anxiety: perceiving challenges as opportunities, enhancing confidence, fostering persistence, encouraging effort, and promoting positive self-perception. Denker et al. (2022) found that students with a communication growth mindset were more engaged in classroom activities and developed better rapport with peers and instructors. Sun and Wang (2024) highlighted a positive relationship between a growth mindset and speaking enjoyment, while Suriyah and Adisti (2024) noted only a weak correlation between a growth mindset and speaking performance, emphasizing the need to investigate non-academic effects. Derakhshan and Fathi (2024) further emphasized the role of a growth mindset in improving L2 speaking performance during assessments.

Collectively, these studies underscore the importance of exploring language mindset as a psychological variable related to speaking skills, shaping learners' motivation, persistence, and emotional responses in speaking-related tasks, ultimately influencing their language learning outcomes.

Methodology

Research Methodology and Research Setting

This study employs Q-methodology to examine Thai undergraduate students' language mindset, specifically in the domain of speaking skills. Q-methodology is a research approach designed to analyze patterns of subjectivity and shared viewpoints among participants (Watt & Stenner, 2005).

Q methodology marks a shift in research orientation, from viewing individuals as variables to be measured, to understanding them as constructors of personal meanings. Rather than focusing on measuring participants objectively, Q seeks to explore how individuals interpret their experiences and how their attitudes relate to those of others within specific group, time, and context. This approach reflects a methodological fusion of quantitative structure and qualitative depth, enabling the systematic study of subjectivity (Thumvichit, 2024). Q-methodology has gained increasing prominence in applied linguistics

research due to its methodological and pedagogical contributions (Morea & Ghanbar, 2024; Thumvichit, 2024). Particularly valuable in educational settings, Q-methodology has been widely utilized to explore the interplay between cognition and emotion in language learning and teaching processes. The versatility of Q-methodology is evident in its diverse applications, including studies on students' learning preferences in communication-focused classrooms (Hall et al., 2021), language instructors' experiences of anxiety (Fraschini & Park, 2021), and teachers' strategies for emotion regulation (Thumvichit, 2023). Q-methodology facilitates a systematic exploration of subjective beliefs and attitudes, enabling the identification of distinct patterns of thought among students. This approach is believed to provide valuable insights into key factors such as the malleability of language abilities, the role of effort in improving speaking skills, and the influence of past experiences on learners' current beliefs about language learning. Through this methodological framework, the study contributes to a more comprehensive understanding of language mindset and its implications for second language acquisition of students in specific settings.

The study was conducted at a university in Northeast Thailand, where many Thai undergraduate students demonstrated low English language proficiency, as indicated by their English Placement Test results. This context highlights the relevance of investigating language mindset, particularly about speaking skills, to inform pedagogical strategies aimed at enhancing students' communicative competence.

P Set

This paper is part of a larger study exploring Thai undergraduate students' speaking language mindset. In this phase, the participants were undergraduate students enrolled in a communication-focused course designed to enhance authentic communication skills, emphasizing speaking proficiency. The participants were selected from the intervention group in prior phase of the classroom intervention; almost all participants self-rated their language proficiency at CEFR A1. In Q-methodology, the P set is purposively assembled to maximize viewpoint diversity rather than statistical representativeness; a sample size of 19 participants is acceptable (Thumvichit, 2024). They were purposively selected based on their majors, years of language learning, and different language learning background. Summary of the participants was presented in Table 1. Prior to data collection, the researchers obtained approval from the Institutional Review Board (IRB) to conduct the study. All participants

received a brief overview of the study and were asked for consent to participate. The anonymity and confidentiality of all participants were ensured.

Table 1
Participants of the Study

Background		Number
Gender	Male	10
	Female	8
	Rather Not Say	1
Major	Engineering (Not Specified)	7
	Mechanical Engineering	3
	Metallurgical Engineering	2
	Electronic Engineering	2
	Polymer Engineering	2
	Electronics and Embedded System Engineering	1
	Agricultural and Food Engineering	1
	Chemical Engineering	1
Years of Language Learning	More than 6–9 years	11
	More than 10–15 years	8
School Location	Rural	11
	Urban	8

Q set

The statements were developed based on the language mindset meaning-making system proposed by Lou and Noels (2019a). This model presented a dichotomous view of the mindset cognitive system and behavioral and emotional responses, which was operationalized under growth and fixed subsystems. Each subsystem elucidated the functioning of growth and fixed mindsets through six motivational factors: effort, attribution, goal orientation, response to failures, self-regulatory tendency, and emotional tendency. Initially, 59 statements were generated. All items were submitted to three experts in applied linguistics for validation. Following an iterative review process, the items were revised based on the experts' recommendations. All items with an IOC score exceeding 0.5 were retained, resulting in a final total of 42 statements. The statements were subjected to pilot testing to assess comprehension and difficulty of items. Subsequently, the statements were revised in accordance with feedback obtained from participants in the pilot study. The statements included seven perspectives as follows: beliefs regarding speaking ability (6 items), effort (4 items), attribution (6 items), achievement goals (8 items), failure and mistake beliefs (4 items), self-regulatory tendency (6 items), and emotion (8 items).

The grid of Q-sorting ranged from −4 (completely disagree), to 0 (neutral), to +4 (completely agree) as presented in Table 2.

Table 2
Sorting Grid

Column value	-4	-3	-2	-1	0	+1	+2	+3	+4
N. of sort	3	3	4	7	8	7	4	3	3

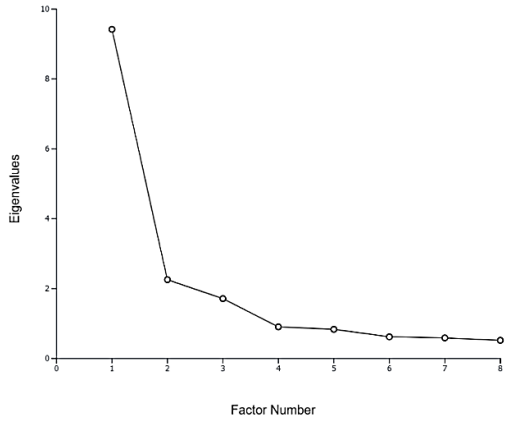
Procedure

Prior to data collection, participants received electronic versions of the statements and the Q-sort grid to familiarize themselves with the materials. In a classroom setting, researchers provided detailed instructions in Thai to ensure participants fully understood the sorting process. This preparatory phase aimed to minimize potential confusion and facilitate a smooth data collection process. Then, the participants sorted the statements on an online platform, Q-TIP: Q-Method Testing and Inquiry Platform. During the sorting task, researchers remained available to assist participants experiencing technical difficulties. Upon completion of the Q-sort, follow-up interviews were conducted with all participants to supplement the quantitative findings. These interviews focused on statements at the extreme ends of the grid (-4 and +4) to gain deeper insights into participants' reasoning. The interview protocol included questions such as: "What is your rationale for strongly agreeing/disagreeing with this statement?" and "Could you elaborate on your perspective regarding this statement?" To ensure the accuracy of data interpretation, researchers employed a member-checking technique, verifying their documentation with participants. This process helped confirm that the recorded responses accurately reflected participants' intended meanings and perspectives.

Analysis and Interpretation

The Q-methodology data analysis was conducted using Ken-Q Version 2.0.0. Principal component analysis with Varimax rotation was applied to examine the underlying structure of the data. A three-factor solution was retained based on the scree test and the eigenvalues greater than 1. The three factors accounted for 63% of the variance across 19 sorts and 42 statements: Factor 1 explained 47% (eigenvalues=8.93), Factor 2 9% (Eigenvalues=1.81), and Factor 3 7% (Eigenvalues=1.27). Factor 4 to 6 had eigenvalues less than 1. The scree plot of the eigenvalues was presented in Figure 2.

Figure 1
Scree Plot of Eigenvalues



The factor arrays represented composite Q-sorts of the viewpoint from each factor. The defining sorts of each composite factor were the items with significant factor loadings. Loadings for Perspective A ranged from 0.534 to 0.896, for Perspective B from 0.472 to 0.822, and for Perspective C from 0.561 to 0.796. The composite reliability of each factor was .98, .92, and .92. Extracted distinguishing statements were the items that contributed to the differences of the composite factors. These statements were analyzed to identify the core themes associated with each perspective. The statements with statistical significance at $p < 0.01$ were included for qualitative interpretation.

Prior to qualitative data analysis, researchers verified the accuracy of interview results with the 19 participants before transcribing the audio recordings and translating the content into English. The back-translation method was employed to ensure accuracy. Thematic analysis, following Braun and Clarke's (2006) guidelines, was conducted to identify emerging themes. Two coders in applied linguistics field familiarized themselves with the data by repeatedly reading the transcripts. A subset of interviews was independently trial coded. Coding decisions were then compared, differences discussed until 100% agreement was reached, and a shared codebook finalized. The full dataset was coded using a consensus approach; codes were grouped into themes, coherence was checked against coded extracts and full corpus, and final definitions and names were assigned. The themes were linked to distinguishing statements to support interpretation. Credibility was enhanced through peer debriefing and negative-case analysis. The final names of the perspectives were derived from the data and refined during the writing process.

Results

The analysis revealed that there were three perspectives regarding domain-specific speaking mindset. The factor arrays were presented in Table 3. Each perspective was presented separately, along with distinguishing statements.

Table 3
Factor Array

Sort number	Factor		
	F1	F2	F3
1	+4*	-1	+1
2	+4*	+1	+1
3	+3*	+2	+1
4	-4*	+1	-1
5	-4*	+1*	-1*
6	-4*	+1*	-1*
7	+3	+4	+2
8	+4*	+2	+1
9	-3	+3*	0*
10	+1	+2	+4
11	+2	0*	+3
12	+3	+2	+3
13	+2*	0	-1
14	-1*	-4	-4
15	-2	+3*	-2
16	0*	+4*	-3*
17	+1	-1	-3*
18	0*	-3	-4
19	+1	0	-1
20	-2	-2	-4
21	0*	-4	-3
22	-2	-3	-2
23	-3	-3	0*
24	+1	+1	-2*
25	+2	+3	0*
26	+1	+1	0
27	-2*	0	0
28	-3	-2	-1
29	+1	0	0
30	+2	-1*	+1
31	+1	+4*	+1
32	-1	+1	0
33	-1	-2	-2
34	-1	0	-1

Table 3
Factor Array (Cont.)

Sort number	Factor		
	F1	F2	F3
35	0	-1	+1
36	0	-4*	0
37	0	-1	+2*
38	0*	-2	+2*
39	-1	-1	+4*
40	0	0	+2
41	-1	0	+3*
42	-1	-1	+4*

Note. *Factor values indicate statistical significance ($p < .01$)

Perspective A: Effort and Practice as a Key to Improve Foreign Language Speaking Ability

Table 4
Distinguishing Statements for Perspective A

N	Statements regarding Language Mindset specific to Foreign Language Speaking Domain	Perspective A	
		Z	Q
1	No matter how intelligent I am, I can always improve speaking a foreign language.	2.05	+4
2	The more I try to learn speaking a foreign language, the better I become.	2.00	+4
8	The harder I practice, the better I will be at speaking a foreign language.	1.71	+4
3	I can learn to speak a foreign language well by practicing enough.	1.62	+3
13	I find it easier to speak a foreign language well because I put enough effort.	0.80	+2
27	When I am failing in speaking a foreign language, it means that I don't have enough talent in language learning.*.	-0.88	-2
4	As a language learner, I have limited ability to speak a foreign language and can't change it.*	-1.40	-4
5	Only a few people can learn and get better at speaking a foreign language, and they were born with this ability. I'm not one of them.*	-1.75	-4
6	To be honest, I don't think I can improve my ability to speak a foreign language.*	-1.98	-4

Note. *Z means Z-score; Q means Q-sort value

Table 4 presented the distinguishing statements for Perspective A. The results indicated that undergraduate students in this study viewed foreign language speaking ability as malleable through effort and practice. They believed that

effort and practice enable learning and improvement. When faced with challenging tasks, they engage in self-monitoring and take control of their studies (Statements 1: +4, 2: +4, 8: +4, 3: +3, and 13: +2). This was reflected in the interview with Participant 10 (Thai undergraduate student) "Some people do not need talent. It is about learning and practicing. If we rely on talent, we might not improve. Everything depends on our own learning."

Other students emphasized starting with manageable tasks to build a foundation, gradually progressing to more advanced topics. "If we start with easier topics, we build understanding. When we encounter difficult topics, we can handle them better." (Participant 8). Similarly, Participant 16 remarked, "Language practice is gradual. Start with easier topics, then move to harder ones." Participant 3 added, "If we cannot speak on difficult topics, we should start with simpler sentences."

Statements 2 and 8 highlighted a positive relationship between effort and speaking performance. Students viewed challenges as opportunities to exert more effort rather than setbacks. They recognized the value of persistence, effort, and practice in improving speaking skills, which also boosted their confidence. They saw easier tasks as a starting point, not an avoidance of challenges. As Participant 12 stated, "I am not very good yet, so I need more practice." Also, Participant 10 noted, "When speaking is difficult, I need to practice more and learn vocabulary."

Students disagreed with high-negative statements (Statements 27: -2, 9: -3, 4: -4, 5: -4, and 6: -4), revealing that they attributed success to effort and practice and believing they could control their speaking proficiency through diligence. As Participant 11 explained, "Talent does not necessarily lead to improvement; it is about discipline and habits."

Perspective B: Self-regulatory Tendencies from Appraisal of Talent and Effort

Table 5

Distinguishing Statements for Perspective B

N	Statements regarding Language Mindset specific to Foreign Language Speaking Domain	Perspective B	
		Z	Q
31	Even if I don't have talent in speaking a foreign language, I try to seek strategies to practice speaking.	2.03	+4
16	I find it hard to speak a foreign language well because I am not good at languages.*	1.82	+4
15	I may need a special talent to speak a foreign language well.*	1.43	+3
9	To tell the truth, when I try hard to improve my foreign language speaking, it makes me feel not very smart.*	1.14	+3
36	I feel comfortable when I speak a foreign language in front of my teacher and classmates.	-1.88	-4

Note. *Z means Z-score; Q means Q-sort value

The distinguishing statements for Perspective B were presented in Table 5. The second perspective illustrated that undergraduate students perceive that they have low language ability (Statements 16: +4, 15: +3, 9: +3). In their viewpoint, talent referred to the ability to perform tasks proficiently. Participant 4 reflected his early experience:

> It is because I think I am not good at languages. As a child, I was a bit against it, did not like it, so I did not use it or speak it much. So, I see it as difficult because I am not good at it, and hence I do not speak it well. Back in middle school, I got very low grades, and I thought, "Am I that bad?" Before that, I was doing okay, but it got really bad, and I felt heavy. So, I decided to be more determined. But despite my best efforts, it did not improve much.

Consequently, when they encountered failure situations in foreign language speaking, they concluded that they lack talent. Furthermore, the students engaged in self-comparison with their previous progress. When they failed to receive confirmation of improvement, they interpreted this as confirmation of their low language abilities. However, they had strong agreement that they would seek strategies to improve their foreign language speaking ability (Statement 31: +4). Participant 4 shared:

> Learning a language requires memory. So, it feels like my ability is insufficient. As I advanced in my studies, knowing I would need to use the language for future work and international studies, it became more necessary. So, I paid more attention and became more determined.

This reflected students' resilience and active approach in their learning. The students recognized that the challenges in their learning might come from their language talent and these challenges could impact their self-esteem. Nevertheless, they demonstrated a willingness to preserve and learn. As Participant 4 shared: "Because I am not good at speaking, stumbling, making mistakes, swapping words, it makes me look unintelligent. But I do not feel bad or upset about it. I acknowledge I am not smart and try harder." Similarly, Participant 6 described a self-direct strategy to improve: "I think now I try to practice speaking through playing games. The games I play mainly use English for communication. I try to help both parties understand each other. Even without talent, you can still practice."

They explained that feeling lacking talent in language learning is not a negative self-assessment but rather an acknowledgment of their current language competence. Consequently, they seek strategies to improve their foreign language speaking skills. In order to enhance foreign language speaking proficiency, increasing effort and developing new strategies were proposed solutions to address their perceived language deficiencies.

Regarding distinguishing negative statement (36: -4), the results indicated that Thai undergraduate students showed a high level of speaking anxiety and discomfort in the classroom settings. Participant 6 reflected on the lasting emotional impact of early learning experiences and the mixed feelings associated with receiving feedback:

> Hmm... It feels like when I try to speak; sometimes I am afraid of making mistakes and not being understood. I was quite an anti-English subject because I had a teacher who would hit us if we could not solve problems. This has made me very resistant. I was angry, but tried to learn, and it was quite difficult. That feeling stuck with me. Now, I am not that afraid, but back in grades 4, 5, and 6, I was very scared. …If a foreigner tells me I am using the wrong grammar, I feel both okay and not okay. I have tried to correct this point and put in more effort. If they criticize harshly, I feel bad, but some people provide constructive criticism, which is helpful.

These discomforts and communication apprehension might be the reason why undergraduate students interpret that it is difficult to improve their foreign language speaking ability. Incorporating with the interview excerpt regarding the feedback with P6, the findings explained why some students experienced discomfort toward feedback or criticism, as they had previously encountered punitive measures and severe feedback from educators and peers when attempting to communicate in a foreign language. In addition to these negative experiences, students asserted that constructive feedback would be beneficial to their learning process.

Perspective C: Discomfort and Communication Apprehension in Classroom Setting

Table 6
Distinguishing Statements for Perspective C

N	Statements regarding Language Mindset specific to Foreign Language Speaking Domain	Perspective C	
		Z	Q
39	I am afraid to speak in my foreign language classes.*	1.96	+4
42	I am afraid people will not understand me when I speak a foreign language.*	1.96	+4
41	I worry of making mistakes when I speak a foreign language.*	1.52	+3
37	I worry that I may make some mistakes when I speak a foreign language.	0.92	+2
38	Even if people don't understand when I speak, I am not afraid to speak a foreign language.	0.79	+2

Table 6
Distinguishing Statements for Perspective C (Cont.)

N	Statements regarding Language Mindset specific to Foreign Language Speaking Domain	Perspective C	
		Z	Q
24	I like a foreign language speaking activity best when it is easy.*	-1.02	-2
16	I find it hard to speak a foreign language well because I am not good at languages.*	-1.10	-3
17	I participate in foreign language speaking activities because I enjoy learning new speaking skills.	-1.23	-3

Note. *Z means Z-score; Q means Q-sort value

The distinguishing statements that characterized Perspective C were presented in Table 6. The third perspective revealed the discomfort and speaking apprehension among undergraduate students (Statements 39: +4, 42: +4, 41: +3, 40: +2, 37: +2, 38: +2). These discomforts consisted of negative emotions related to speaking a foreign language during classroom activities where the students have to speak in front of their classmates. Moreover, the fear of making mistakes and the fear of producing unintelligible speeches resulted in students' speaking apprehension. Participant 1 expressed this fear:

> Since I am not fluent in English yet, I am afraid that when I try to speak, others might not understand what I am trying to say or I am afraid that I will say something wrong. It might be because I do not understand. When I do activities, I do not know what other students are saying, or I might be afraid of speaking, like how I answered that I am scared of speaking in front of many people.

Similarly, Participant 17 mentioned that "I am afraid of making mistakes and that others will not understand what I am saying. My friends might not understand me well. It might be because I do not know much vocabulary."

The apprehension regarding errors and incomprehensible speech arose from students' self-evaluation of their speaking performance, which led them to perceive their foreign language abilities as inadequate. This self-perception induced anxiety when they were required to communicate in a foreign language within the classroom environment. Although they had not reported receiving any explicit judgment or criticism from their peers, the fear of making mistakes and the apprehension of negative evaluation have resulted in excessive reflection about their speaking performance. Furthermore, the students indicated that if the instructor could foster a supportive atmosphere in the classroom, such as facilitating rapport-building among peers before initiating speaking

activities, this measure could enhance their comfort level and increase their confidence in speaking a foreign language within the classroom setting. As Participant 5 expressed, “In my current class, I do not know everyone. Sometimes I get nervous. If we were close, I would feel more comfortable speaking.”

Although they expressed strong negative emotions, the agreement on distinguishing negative statements showed that undergraduate students in this study did not attribute speaking difficulties to talent only but also attributed them to lack of effort and practice (Statement 16: -3).

As Participant 5 explained: “I think that people with talent might learn faster, but they might also need effort. Even if they have talent, if they do not make an effort to speak, they still cannot speak well.” Participant 1 also acknowledged the need for persistence: “It feels like when I fail, the abilities I have might not be enough. I just have to try again. The abilities I have are not yet sufficient to make me successful.”

This reflected students’ perception that effort and practice could lead to improvement in their foreign language speaking. Although they perceived themselves as lacking in talent, they also recognized the value of effort in acquiring foreign language speaking skills. Consequently, in addition to experiencing discomfort during speaking activities, the students engaged in self-evaluation and sought strategies to enhance their foreign language speaking abilities.

Regarding the distinguished negative statements, the results revealed that the participants disagreed that they prefer to participate in easy speaking tasks (Statement 24: -2). Moreover, the results suggested that undergraduate students experience discomfort during their learning of foreign language speaking since they disagreed that they participate in foreign language speaking activities because they enjoy learning speaking skills (Statement 17: -3). Participant 17 uttered: “I feel scared and do not want to speak again or join activities, specifically for English. I can join everything else. I once answered English questions at a school event and did not like it. I only went because of friends.”

This suggested that tasks difficulties might not be the factor that the students took into consideration of participating in foreign language speaking activities. Considering with the distinguished positive statement, it was apparent that it was difficult for Thai undergraduate students to overcome their speaking anxiety. As Participant 1 stated: “If there were activities that I could participate without things that make me feel foolish and uncomfortable like negative judgement from peers, I would want to participate in speaking activities.”

Table 7
Consensus Statements

N	Statements regarding Language Mindset specific to Foreign Language Speaking Domain	Factor 1		Factor 2		Factor 3	
		Z	Q	Z	Q	Z	Q
12	I may need to put effort to speak well.	1.31	3	1.80	4	1.03	2
20	I participate in speaking activities to prove that I'm better at speaking.	-0.96	-2	-1.58	-4	-0.79	-1
28	When I am failing it means that it is fruitless to practice speaking.	-1.21	-3	-0.42	-1	-0.88	-2
33	I don't like corrective feedback and criticisms.	-0.62	-1	-0.53	-1	-1.23	-2

Note. *Z means Z-score; Q means Q-sort value

According to Table 7, four statements became consensus. All participants agreed to statement 12, and disagreed to statement 20, 28, and 33. These consensus statements showed the shared perspectives among Thai undergraduate students about the value of effort, mastery goals, and corrective feedback in enhancing their foreign language speaking.

Discussion

This study contributes to the growing body of research on language mindset by examining the perspectives of undergraduate students in Science and Technology university regarding their foreign language speaking abilities. Through Q-methodology, three distinct perspectives emerged: (A) the belief that effort and practice are essential for improving foreign language speaking ability, (B) self-regulatory tendencies shaped by the evaluation of one's talent and effort, and (C) discomfort and communication apprehension in classroom settings. These perspectives offer insights into how the participants conceptualize their beliefs of foreign language speaking. The consensus statements suggest that participants share the common belief that their foreign language speaking abilities can be improved through effort. They participate in speaking tasks to improve their skills and not to prove that they are better than their peers are. They perceive feedback and criticism as beneficial to their learning. Underlying this shared viewpoint, the three perspectives demonstrate the multifaceted nature of the speaking mindset of Thai undergraduate students, as discussed below.

The first perspective highlights a strong belief in effort and practice as key determinants of success in foreign language speaking. The participants in this study demonstrate a mindset that guided them to perceive language proficiency as an attainable skill that improves with effort rather than being solely dependent on innate talent. Prior studies (Janudom, 2023; Wilang, 2024a)

have reinforced similar findings, emphasizing that Thai students recognize the role of personal commitment in language learning. However, the cultural dimension of effort in Thailand presents an interesting paradox. While collectivist cultures often emphasize sustained, long-term effort, Thai culture exhibits a short-term orientation that prioritizes immediate results over prolonged persistence (Salsarola, 2023). This contradicts conventional notions of effort-based success, as short-term oriented cultures typically do not attribute outcomes to effort (Hofstede & Minkov, 2010). Consequently, the participants may exhibit avoidance behaviors, as apparent in the second perspective: when they face language learning difficulties, they opt for easier tasks to achieve immediate success rather than engaging in prolonged effort for long-term mastery. This is consistent with the study by Horwitz (1986) which suggested that when the students predicted that the tasks were beyond their level, they showed an inclination toward doing difficult tasks. Despite this inclination, the findings from Q-methodology suggest that the participants exhibit a complex understanding of language learning, balancing cultural expectations with their awareness of effort and practice as controllable factors in their linguistic development. The emphasis on deliberate practice aligns with usage-based theories of language acquisition, which argue that language proficiency emerges from repeated exposure, active engagement, and interaction with linguistic input (Tomasello, 2005). Students' belief in effort-driven improvement reinforces the importance of structured speaking opportunities, meaningful communicative interactions, and instructional strategies that support gradual skill development.

The second perspective underscores the significance of self-regulation in language learning experiences. Self-efficacy, or an individual's belief in their ability to achieve learning goals, plays a crucial role in students' motivation, persistence, and performance (Bandura, 1997). Despite perceiving low language ability, many participants exhibit resilience, viewing challenges as opportunities for growth rather than insurmountable barriers. This process aligns with the cyclical nature of self-regulated learning, in which students set learning goals, seek feedback, and reflect on their performance (Yan & Brown, 2017). The findings suggest that participants actively engage in self-directed learning strategies, particularly when preparing for assessments. By setting their own criteria for success, seeking self-directed feedback, and reflecting on their strengths and weaknesses, they develop adaptive learning strategies that enhance their linguistic and metacognitive skills. This cyclical process fosters problem-solving abilities, perseverance, and a proactive approach to self-improvement. However, a follow-up interview from Q-methodology revealed a critical challenge emerged in students' perceptions of feedback. Many participants expressed discomfort with receiving corrective feedback, citing negative past experiences with punitive evaluation methods. This

reluctance to accept constructive criticism may stem from an educational culture that emphasizes correctness over progress, potentially discouraging students from actively engaging in speaking activities. Studies have shown that negative feedback experiences can undermine confidence and motivation, leading students to avoid situations where they might receive criticism (Yan & Brown, 2017).

The third perspective highlights the prevalence of speaking anxiety among the participants, which significantly impacts their classroom participation and language development. The findings suggest that students' fear of making errors and negative evaluation by both peers and instructors contributes to their reluctance to engage in speaking activities. This anxiety is particularly evident among students who perceive low language proficiency, reinforcing a self-perpetuating cycle of avoidance behavior (Kalra & Siribud, 2020; Ozdemir & Papi, 2022). Research has consistently demonstrated the detrimental effects of foreign language speaking anxiety on students' fluency, accuracy, and overall speaking performance (Ozdemir & Papi, 2022). When learners experience heightened anxiety, they are more likely to hesitate, struggle with word retrieval, and exhibit communication breakdowns, all of which further reinforce their self-perception of inadequacy. To mitigate these effects, educators should implement confidence-building strategies that promote a supportive and inclusive classroom environment. Additionally, reducing the emphasis on error correction and shifting towards positive reinforcement may alleviate the fear of negative evaluation, encouraging students to engage more actively in speaking activities.

Building on the three perspectives and the shared viewpoint among the participants, the overlapping characteristics suggest that the foreign language speaking mindset is not mutually exclusive but context-sensitive. The results support the notion that language mindset is a dynamic continuum (Lou & Noels, 2019a; Yeager & Dweck, 2020). The interplay between these perspectives offers a subtle understanding of mindset. While the first perspective emphasizes the role of effort in learning, the second perspective highlights the relationship between self-perception and students' strategy use, in which talent plays a role in students' selection of strategies to navigate challenging situations. This shows a fluidity of mindset that adapts according to the learning environment. The third perspective introduces a layer of the dynamic nature of foreign language speaking mindset by addressing the emotional challenges faced by Thai undergraduate students. Negative emotions suggest that although students recognize the importance of effort, emotional barriers can impede the adoption of a mindset toward growth. These findings revealed that Thai undergraduate students exhibit characteristics from multiple perspectives.

The findings from Q-methodology highlight the unique language learning experiences within the science and technology university. The study also reveals context-specific subtleties that reflect the particular characteristics of Thai educational culture and its approach to language learning. These findings

underscore the importance of considering both universal and culture-specific factors when examining language mindsets. The study's results support the notion of viewing language mindset as a continuum construct rather than a fixed, binary concept. This perspective emphasizes the dynamic nature of language mindsets, suggesting that learners' beliefs about language learning can shift and evolve over time. Recognizing this fluidity calls for the development of more sophisticated tools and methodologies to explore and measure the complex and multifaceted nature of language mindsets. Such tools would enable researchers and educators to better understand how language mindsets interact with various factors, including cultural context, individual experiences, and educational practices, ultimately leading to more effective language teaching and learning strategies in the future.

Conclusion

This study distinguished three patterned viewpoints on participants' foreign language speaking mindset. These viewpoints show a consistent endorsement of effort and practice that coexists with apprehension in classroom speaking. This misalignment is characterized as the effort-threat gap. This reflects that students may believe effort works but do not always put it into practice when speaking feels evaluative or unsafe. Three cross-cutting insights clarify how this operates in a science and technology-oriented context where English is often instrumental.

First, students broadly value gradual practice and see effort as necessary for improvement; however, the participation drops when tasks are framed as performance rather than learning. Second, students who downplay talent still mobilize self-regulatory strategies such as planning, monitoring, and seeking input, but their willingness to apply these strategies depends on how feedback is delivered. Third, communication apprehension is a pivotal brake: when anxiety is high, growth-oriented beliefs fail to convert into actual speaking. These insights assist in explaining why many learners know that practice helps but they still refrain from speaking in real time. Students have valued effort; what unlocks their participation is lowering perceived threat and making strategy-rich, feedback-safe speaking routine. These could eventually turn endorsement of effort into sustained oral engagement.

Theoretically, the findings extend language mindset meaning system model by specifying a mechanism in the speaking domain. Rather than a simple fixed or growth stance, the results portray coexisting beliefs and emotions that are sensitive to classroom affordances such as evaluation, publicity, and correction. This clarifies when a growth-oriented belief translates into participation in Thai EFL context, particularly in science and technology universities.

Methodologically, employing Q-methodology made visible within-person tensions that standard surveys often compress, for instance, endorsing effort while anticipating embarrassment. Factor arrays anchored interpretation, and follow-up interview reasoning explained why students sorted statements as they did. These procedures offer a transferable design for studies that seek patterned and subtle perspective on speaking.

Pedagogically, to narrow the effort-threat gap, it requires feedback that is specific and forward-looking rather than public correctness policing, tasks that are deliberately sequenced from structured, low-evaluation formats toward more public speaking, and explicit visibility of strategies such as pre-task planning, formulaic language, and repair strategies with brief guided reflection on their use. The supportive classroom climate created through routine rapport-building and predictable procedures before assessed speaking further aligns students' effort beliefs with safer opportunities to practice.

Limitations and Future Research

This study was conducted with the undergraduate students at a single science and technology university in the Northeastern part of Thailand with a purposive P set (n=19), consistent with Q-methodology's goal of mapping viewpoints rather than estimating population prevalence. Transferability is therefore conceptual rather than statistical. The institutional and regional context likely shaped the salience of the perspectives observed; where English is treated instrumentally and assessment is prominent, students may experience stronger tension between adopting effort and speaking under perceived evaluation. Other settings with different feedback norms, class sizes, or participation culture, may surface alternative patterns or different weights on the same themes.

The study design is cross-sectional, which captures perceptions at one point. Hence, it may be unable to trace how classroom interaction and emotions evolve over time. This reflects Q-methodology's strengths and constraints: it systematically reveals patterned subjectivities and the reasoning behind them, yet it is not designed to model temporal dynamics in target population.

Future studies can build on these boundaries by conducting a cross-institutional comparisons with sample across Thai regions or program types to examine where the effort-threat gap intensify or diminish. Comparative study in other Asian EFL contexts could test whether similar patterns emerge and identify instructional norms that most effectively reduce communication apprehension. The longitudinal study such as repeated Q-sorts across a semester or pre/post pedagogical changes could show whether shifts in threat appraisals

preceded increases in willingness to communicate and the number of in-class turns. Classroom-based interventions should also be piloted, including feedback-literacy for instructors, low-stakes speaking activities, and explicit strategy instruction to reduce speaking anxiety.

Biodata

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Appendix

Statements of Q-set

	Statements
1.	No matter how intelligent I am, I can always improve speaking a foreign language.
2.	The more I try to learn speaking a foreign language, the better I become.
3.	I can learn to speak a foreign language well by practicing enough.
4.	As a language learner, I have limited ability to speak a foreign language and can't change it.*
5.	Only a few people can learn and get better at speaking a foreign language, and they were born with this ability. I'm not one of them.*
6.	To be honest, I don't think I can improve my ability to speak a foreign language.*
7.	When speaking a foreign language is hard, it makes me want to practice more, not less.
8.	The harder I practice, the better I will be at speaking a foreign language.
9.	To tell the truth, when I try hard to improve my foreign language speaking, it makes me feel not very smart.*
10.	If I struggle with a difficult speaking task in a foreign language, I should try easier one.*
11.	I think I can improve to speak a foreign language well because of hard work.
12.	I may need to put effort to speak a foreign language well.
13.	I find it easier to speak a foreign language well because I put enough effort.
14.	I think I can speak a foreign language well because I have a talent in learning foreign languages.*
15.	I may need a special talent to speak a foreign language well.*
16.	I find it hard to speak a foreign language well because I am not good at languages.*
17.	I participate in foreign language speaking activities because I enjoy learning new speaking skills.
18.	I like foreign language speaking activities that challenge me.
19.	I participate in foreign language speaking activities to improve my skills.
20.	I participate in foreign language speaking activities to prove that I'm better at it than others in my class.*
21.	I prefer foreign language speaking activities that are similar to tasks I've done before.*
22.	I participate in foreign language speaking activities so others in my class won't think I'm dumb.*

Statements
23. I might not participate in a foreign language speaking activity to avoid looking foolish when speaking.*
24. I like a foreign language speaking activity best when it is easy.*
25. When I am failing in speaking a foreign language, it means that I have to put more effort to improve my speaking.
26. When I am failing in speaking a foreign language, it means that I should find the other ways to practice my speaking.
27. When I am failing in speaking a foreign language, it means that I don't have enough talent in language learning.*
28. When I am failing in speaking a foreign language, it means that it is fruitless to practice speaking.*
29. When I couldn't do a difficult foreign language speaking task, I will try to find what makes me unable to do it.
30. I feel good when I receive corrective feedback and criticisms on my speaking performance because they make my speaking better.
31. Even if I don't have talent in speaking a foreign language, I try to seek strategies to practice speaking.
32. When I couldn't do a difficult foreign language speaking task, it probably means that the task is beyond my level.*
33. I don't like corrective feedback and criticisms because it suggests that I am not good at speaking a foreign language.*
34. Trying new learning strategies is a waste of time if I do not have talent in speaking a foreign language.*
35. I am eager to speak a foreign language in my class.
36. I feel comfortable when I speak a foreign language in front of my teacher and classmates.
37. I don't worry that I may make some mistakes when I speak a foreign language.
38. Even if people don't understand when I speak, I am not afraid to speak a foreign language.
39. I am afraid to speak in my foreign language classes.*
40. I feel nervous when I have to speak a foreign language in front of my teacher and classmates.*
41. I worry of making mistakes when I speak a foreign language.*
42. I am afraid people will not understand me when I speak a foreign language.*