

## Effects of a Growth Mindset Inquiry Learning Model on Kindergarten Children's English Self-Development in Thai-English Bilingual Context

Aungsiya Krataytong, Srinakharinwirot University, Thailand  
Panitta Wongphanich, Srinakharinwirot University, Thailand  
Suwicha Wansudon, Srinakharinwirot University, Thailand  
Phatcharida Inthama, Srinakharinwirot University, Thailand

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### Abstract

This study examined the effects of a growth mindset-based inquiry learning model on self-development in English language learning among kindergarten children aged 5–6 in a Thai–English bilingual school. It aimed to identify appropriate growth mindset characteristics for early childhood learners and evaluate the effectiveness of integrating growth mindset principles with inquiry-based learning. A one-group pretest–posttest design was employed with 25 students selected through purposive sampling during Semester 1 of the 2024 academic year. The eight-week intervention integrated inquiry-based activities to develop listening, speaking, reading, and writing skills. The model emphasized effort, perseverance, learning from peers, embracing challenges, and responding positively to feedback and learning processes. Research instruments included lesson plans, pre- and post-tests, a student satisfaction questionnaire, and an observation checklist assessing self-development across five dimensions. All instruments were validated and demonstrated high reliability. The findings indicated that students' self-development in English learning significantly improved after the intervention at the .05 level. Observations showed increased confidence, active participation, greater willingness to express ideas, and enjoyment in learning activities. Additionally, 88% of students reported increased confidence and engagement. Overall, integrating growth mindset principles with inquiry-based learning proved to be an effective approach for enhancing young learners' self-development in English language learning.

*Keywords:* growth mindset, self-development, teaching English language in bilingual context

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## Introduction

Early childhood education plays a critical role in laying the foundation for children's lifelong learning and holistic development. In recent years, educational research has emphasized that learning outcomes in early childhood should not be limited to academic achievement but should also include children's self-development, such as confidence, motivation, persistence, and positive attitudes toward learning (Noklang et al., 2023; OECD, 2020). In Thailand, early childhood education is guided by the national curriculum, which emphasizes holistic development and child-centered learning approaches (Office of the Basic Education Commission [OBEC], 2017). These aspects of self-development are particularly important in early English language learning, where young learners may experience anxiety, fear of making mistakes, or low self-efficacy (Sabti et al., 2019).

One influential concept that addresses learners' beliefs about their abilities is Growth Mindset, proposed by Dweck (2006). Growth mindset refers to the belief that abilities and intelligence can be developed through effort, effective strategies, and support from others. Research has shown that children who develop a growth mindset tend to demonstrate higher levels of motivation, resilience, and engagement in learning tasks (Yeager & Dweck, 2012). In early childhood settings, fostering a growth mindset has been found to support children's self-confidence, willingness to try new tasks, and positive responses to challenges, which are essential components of self-development. Research has shown that children who develop a growth mindset tend to demonstrate higher levels of motivation and engagement (Yeager & Dweck, 2012) including in Thai educational contexts (Sukklang & Wilang, 2025).

In parallel, Inquiry-Based Learning (IBL) has been widely recognized as an effective instructional approach for young children. Inquiry-based learning emphasizes active exploration, questioning, and meaning-making through hands-on experiences rather than passive reception of knowledge (Hmelo-Silver et al., 2007). For kindergarten children, inquiry-based activities provide meaningful contexts for language use, allowing learners to communicate ideas, express curiosity, (Worth & Grollman, 2003) and reflect on their learning experiences. Previous studies have indicated that inquiry-based learning promotes deeper understanding and engagement particularly in early childhood classrooms (Eshach & Fried, 2005; Noklang, 2019).

Within Thai-English bilingual learning contexts, young children often encounter challenges in English learning due to limited exposure to the language outside the classroom and fear of making errors (Prapaisit de Segovia & Hardison, 2009; Promata et al., 2024). Research in bilingual education suggests that effective bilingual instruction should create emotionally safe learning environments, encourage risk-taking, and emphasize meaningful interaction rather than rote memorization (Cummins, 2000). Integrating growth mindset principles into inquiry-based learning may help children perceive English learning as a gradual and achievable process, thereby enhancing their self-development and reducing learning anxiety (Piwlueng et al., 2025). Although previous studies have examined growth mindset and inquiry-based learning independently, there remains a lack of empirical research that integrates growth mindset principles within inquiry-based learning models for kindergarten English learning, particularly in Thai-English bilingual contexts. Furthermore, limited research has focused specifically on children's self-development as a key outcome of such instructional models. Therefore, there is a need to investigate whether an inquiry-based learning model that promotes a growth mindset can positively influence kindergarten children's self-development in English learning (Krataytong & Saleemad, 2023).

In response to this gap, the present study aims to examine the effects of a Growth Mindset–Based Inquiry Learning Model on kindergarten children’s self-development in English learning within a Thai–English bilingual context. Additionally, the study seeks to compare children’s self-development before and after the implementation of the instructional model. The findings are expected to contribute to early childhood pedagogy, bilingual education practices, and the development of instructional approaches that support both language learning and holistic child development.

### **Research Objectives**

1. To examine the effects of a Growth Mindset–Based Inquiry Learning Model on kindergarten children’s self-development in English learning Within a Thai-English Context Bilingual.
2. To compare kindergarten children’s self-development in English learning before and after the implementation of the learning model.

### **Methodology**

This study employed a quasi-experimental design using a one-group pretest–posttest approach to examine the effects of a Growth Mindset–Based Inquiry Learning Model on kindergarten children’s self-development in English learning within a Thai–English bilingual context. This design enabled comparison of learning outcomes before and after the intervention.

### **Population and Sample**

The population consisted of kindergarten children aged 5–6 years who were enrolled in schools implementing Thai–English bilingual instruction.

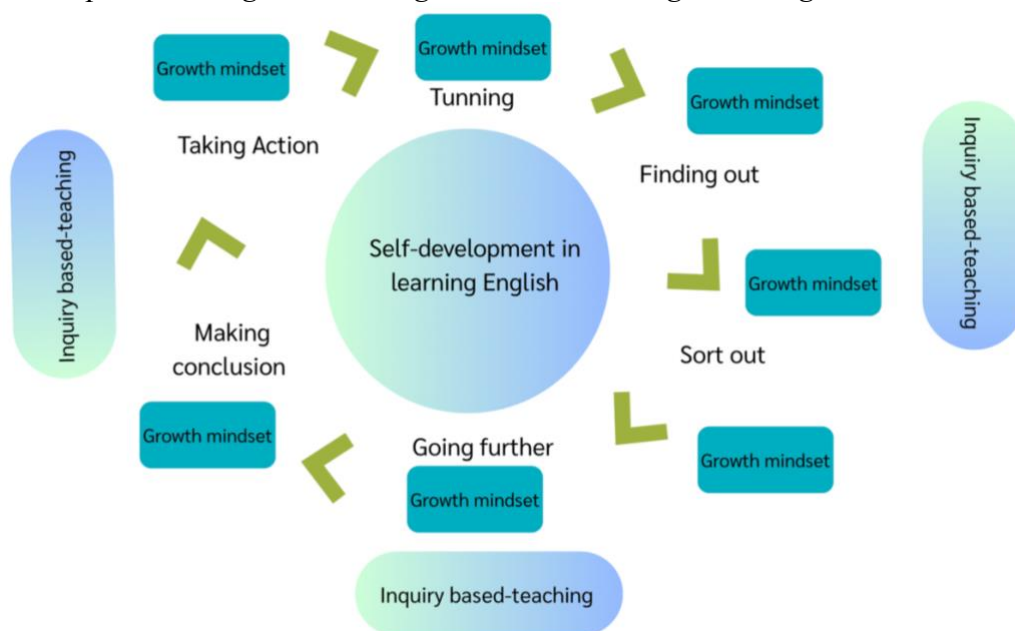
### **Sample**

The sample comprised two Kindergarten 3 classrooms, with approximately 25 children per classroom, resulting in a total of about 50 participants. The sample was selected using purposive sampling based on the following criteria:

1. The school provided Thai–English bilingual instruction.
2. Children were enrolled in Kindergarten 3 (ages 5–6).
3. Parental consent for participation in the research was obtained.

### Learning Model

**Figure 1**  
*Growth Mindset–Based Inquiry Learning Model on Kindergarten Children’s Self-Development in English Learning Within a Thai–English Bilingual Context*



### Results and Discussion

**Table 1**  
*Effectiveness Index of a Growth Mindset–Based Inquiry Learning Model on Kindergarten Children’s Self-Development in English Learning Within a Thai-English Context Bilingual*

Posttest Score	Effectiveness Index	Number of Students	Full Score	Pretest Score
481	0.8127	25	36	585

Table 1 shows that a Growth Mindset–Based Inquiry Learning Model on Kindergarten Children’s Self-Development in English Learning Within a Thai-English Context Bilingual had an effectiveness index of 0.8127, indicating that kindergarten children’s growth mindset characteristics improved by 81.27 percent.

**Table 2**

*Comparison of Kindergarten Children's Growth Mindset Characteristics Before and After the Implementation of Growth Mindset-Based Inquiry Learning Model*

Growth Mindset Characteristics	Pre-test			Post-test		
	$\bar{X}$	SD	Level	$\bar{X}$	SD	Level
1.Effort	2.04	0.73	Moderate	2.62	0.49	Good
I can try to say new English words, even if they are hard.	1.96	0.73	Moderate	2.68	0.48	Good
I can try new English activities or games.	2.12	0.73	Moderate	2.56	0.51	Good
2.Perseverance	1.48	0.62	Need Improvement	2.74	0.45	Good
I can keep trying when English feels difficult.	1.52	0.65	Moderate	2.72	0.46	Good
I can try a different way when I make a mistake in English.	1.44	0.58	Need Improvement	2.56	0.54	Good

**Table 3**

*Comparison of Kindergarten Children's Growth Mindset Characteristics Before and After the Implementation of Growth Mindset-Based Inquiry Learning Model*

Growth Mindset Characteristics	Pre-test			Post-test		
	$\bar{X}$	SD	Level	$\bar{X}$	SD	Level
3. Learning from peers	1.32	0.48	Need Improvement	2.56	0.54	Good
I can feel happy when my friends do well in English.	1.32	0.48	Need Improvement	2.56	0.54	Good
I can learn by listening to how my friends speak English	1.24	0.44	Need Improvement	2.56	0.54	Good

4. Facing challenges	1.32	0.48	Need Improvement	2.56	0.54	Good
I can try to say new English words, even if they are hard.	1.32	0.48	Need Improvement	2.56	0.54	Good
I can try new English activities or games.	1.24	0.44	Need Improvement	2.48	0.51	Good
5. Valuing the Learning Process	1.48	0.58	Need Improvement	2.64	0.49	Good
I can feel proud when I try my best in English.	1.48	0.59	Need Improvement	2.64	0.50	Good
I can say, "I can do it better now!" when I improve.	1.44	0.58	Need Improvement	2.64	0.49	Good

**Table 4**

*Comparison of Kindergarten Children's Growth Mindset Characteristics Before and After the Implementation of Growth Mindset-Based Inquiry Learning Model*

Growth Mindset Characteristics	Pre-test			Post-test		
	$\bar{X}$	SD	Level	$\bar{X}$	SD	Level
6. Learning Goals	1.30	0.47	Need Improvement	2.52	0.50	Good
I can talk about what I learned in English today.	1.28	0.46	Need Improvement	2.52	0.50	Good
I can set a small goal, like saying one full sentence in English.	1.32	0.48	Need Improvement	2.44	0.51	Good
Total	1.50	0.57	Need Improvement	2.61	0.51	Good

### **The Comparison of Growth Mindset Characteristics of Preschool Children Before and After the Experiment (Overall)**

Table 4 presents a comparison of preschool children's growth mindset characteristics before and after the experiment. The results show that the mean scores of all six characteristics increased after the experiment.

Before the experiment, the overall mean scores of the characteristics were relatively low, ranging from 1.28 to 2.04. After the experiment, the mean scores increased significantly, ranging from 2.52 to 2.74, indicating improvement in children's growth mindset characteristics.

Among the six characteristics, effort showed the highest improvement (Mean difference = 1.28,  $t = 9.94$ ,  $p < .05$ ), followed by persistence (Mean difference = 1.26,  $t = 8.34$ ,  $p < .05$ ) and setting learning goals (Mean difference = 1.22,  $t = 8.78$ ,  $p < .05$ ). Other characteristics such as valuing others' success, valuing work, and challenge also showed significant improvement.

The results of the paired-sample t-test indicated that all differences between the pre-test and post-test scores were statistically significant at the .05 level (Sig. = .00). This suggests that the learning activities implemented in the experiment were effective in enhancing the growth mindset characteristics of preschool children.

Overall, the findings indicate that the educational intervention contributed positively to improving children's willingness to face challenges, persistence, effort, appreciation of work and others' success, and their ability to set learning goals.

### **Discussion**

This study examined the impact of a growth mindset-based inquiry learning model on young children's self-development in English language learning. The findings indicate that fostering a growth mindset significantly promoted persistence among kindergarten learners. When children were encouraged to view challenges as opportunities for learning, they became more willing to attempt tasks, practice continuously, and sustain effort despite difficulties. This finding is consistent with Dweck (2006) & (Saleemad & Krataytong, 2018), who emphasised that learners' beliefs about effort and ability influence motivation and achievement. In addition, the integration of inquiry-based learning activities enhanced students' engagement and confidence. Through questioning, exploration, and collaborative interactions, learners became active participants rather than passive recipients of knowledge. This supports constructivist perspectives on learning, particularly Vygotsky and Cole's (1978) social constructivist theory, which highlights the importance of social interaction in cognitive development.

Furthermore, the Thai-English bilingual learning environment supported meaningful language use (Heepjantree et al., 2026). By embedding English within authentic classroom interactions, children were able to practice language naturally, thereby strengthening their communication skills. This aligns with Krashen's (1982) input hypothesis, which suggests that language acquisition occurs most effectively when learners are exposed to meaningful and comprehensible input in context. As a result, students demonstrated more positive learning dispositions, including increased motivation, persistence, and confidence in English learning. These findings are also consistent with early childhood learning theories, which emphasise

active learning, social interaction, and supportive environments as essential for young learners' development (Piaget, 1952; Vygotsky & Cole, 1978).

Overall, the integration of growth mindset principles with inquiry-based learning provides an effective approach for enhancing young learners' self-development in English language learning, particularly in the context of contemporary educational transformations (Sinlapakitjanon et al., 2026). to enhancing young learners' self-development in English language learning.

### **Conclusion**

This study demonstrates that the Growth Mindset–Based Inquiry Learning Model significantly improved young children's self-development, engagement in English learning, and key learning dispositions, including effort, persistence, and confidence. These findings support the view that fostering a growth mindset enhances learners' motivation and resilience, particularly in early childhood contexts. Furthermore, the integration of inquiry-based learning contributed to increased engagement and active participation, enabling children to construct knowledge through exploration and interaction. This is consistent with constructivist learning theories, which emphasise the role of active learning and social interaction in cognitive development. Active learning approaches have also been shown to enhance self-directed learning and engagement among Thai learners. In addition, the bilingual learning environment provided meaningful opportunities for authentic language use, supporting children's communication skills and confidence in English learning.

Overall, the findings suggest that the integration of growth mindset principles with inquiry-based learning is an effective instructional approach for supporting young learners' self-development in bilingual kindergarten education.

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