

Effects of EPIRIS Model-Based Instructional Innovation on Thai Primary Students' English Tense Learning

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Abstract

English tense acquisition remains a persistent challenge for Thai primary school students in EFL contexts, where traditional grammar-translation methods have proven inadequate in fostering durable form-meaning connections and active language practice. This study investigated the effects of EPIRIS model-based instructional innovation on primary students' achievement, motivation, and perceptions related to learning English past tenses, while examining relationships between student motivation, engagement, interaction, and learning outcomes. An explanatory sequential mixed-methods design was employed with 86 participants comprising 66 primary students aged 9–12 and 20 English teachers from 10 schools in Samut Sakhon province, Thailand. The intervention consisted of a 12-hour EPIRIS-structured program delivered over two weeks, incorporating six sequential steps: elicitation, presentation, innovation use, retention practice, interaction, and summary and assessment. Data collection included pretest-posttest measures; validated questionnaires assessing motivation, engagement, and interaction; and semi-structured interviews with purposively selected participants. Results demonstrated significant improvements in student achievement with a mean gain of 6.11 points out of 20 possible points ($p < .001$). Participants reported high levels of motivation ($M = 3.71$), engagement ($M = 3.64$), and interaction ($M = 4.60$) with strong positive correlations among these constructs ($r = .769$ to $.799$). Qualitative analysis revealed three major themes: transformation from passive to active learning, enhanced collaborative learning and peer support, and reduced anxiety with increased confidence. The EPIRIS model demonstrated substantial effectiveness in improving both cognitive and affective outcomes in primary EFL grammar instruction, providing initial evidence for adopting systematic, interactive, pedagogical approaches in English language education.

Keywords: EPIRIS model, English tense acquisition, EFL instruction, primary education, mixed-methods research

1. Introduction

English proficiency is now a prerequisite for academic advancement and global employability. Thailand's education policy therefore prioritises English, explicitly linking improvement efforts to Sustainable Development Goals 4 (quality education) and 10 (reduced inequalities; United Nations Thailand, 2025a, 2025b). Yet Thai learners, especially in rural primary schools, still rank low in regional proficiency indices, and control of verb tense is a persistent weakness (Iamsirirak & Phoocharoensil, 2023).

1.1 Persistent Challenges in English Tense Learning in the Thai EFL Context

English signals time through verb inflections and aspectual auxiliaries, whereas Thai relies mainly on adverbials and discourse context. The absence of parallel forms in Thai fosters negative transfer: learners routinely omit past-tense '-ed' or misuse progressive markers, hampering clarity and assessment scores (Iamsirirak & Phoocharoensil, 2023). Large-scale error analyses confirm that tense misuse remains the most frequent grammatical problem for Thai primary pupils after six or more years of schooling (Stephens & Sanderson, 2021).

1.2 Traditional Grammar-Translation Instruction

Much Thai grammar instruction is still lecture-based, textbook-centred, and exam-oriented. Teachers present rules (e.g., S + V2), drill isolated sentences, and correct errors publicly—strategies that rarely foster durable form–meaning connections or encourage active practice (Noom-Ura, 2013). Observational studies of rural classrooms describe disengaged pupils, few communicative tasks, and little differentiation for mixed-ability groups (Chabundit & Krobsanthia, 2024). Consequently, gains are short-lived; students can recite rules yet fail to apply tenses in writing or speech (Stephens & Sanderson, 2021).

1.3 Instructional Innovation to Enhance Quality Education and Reduce Inequalities in Rural Schools

International and Thai research suggests that learner-centred, multimodal methods boost grammar uptake. Allard and Mizoguchi (2021) used timeline-based visualisations to accelerate tense–aspect mastery. Siri (2022) showed that a gamified mobile app increased primary students’ post-test scores and enjoyment, while Karanjakwut (2024) reported significant improvements from a toolkit combining structured exercises with context-rich practice. Such designs align with cognitive load theory, which recommends dual-channel presentations and scaffolded practice to optimise working memory (Sweller, 1994; Mayer, 2009), and with sociocultural theory emphasising peer interaction within the zone of proximal development (Vygotsky, 1978).

1.4 Needs for an Integrated Pedagogical Model

Most innovations, however, are single-tool or single-activity interventions. Teachers lack a cohesive roadmap showing how to sequence schema activation, explicit input, guided practice, interaction, and assessment in one lesson. Responding to this gap, Karanjakwut et al. (2024) derived the EPIRIS model—six ordered steps for teaching grammar with innovation: elicitation of prior knowledge, presentation of the target form, innovation use (hands-on activity or tool), retention practice (spaced rehearsal), interaction (communicative use), and summary and assessment. Early qualitative evidence indicates that EPIRIS helped teachers structure richer, student-centred tense lessons and raised engagement in small rural classes.

1.5 The Present Study and Context in Thai Educational Reform

Despite its conceptual appeal, EPIRIS has not yet been tested through controlled quantitative measures of student learning, nor has research examined its effect on motivation—an affective construct central to sustained language development (Dörnyei, 1994). Previous Thai studies often celebrated score gains but under-reported learners’ perceptions of why an innovation felt useful or enjoyable. Moreover, long-term retention—arguably the most important outcome—has seldom been tracked beyond immediate posttests. Finally, almost no study triangulates teachers’ reflections, pupils’ voices, and achievement data within the same project, leaving the causal pathways of success opaque.

Thailand’s reform agenda recognises that quality improvements must reach under-resourced ‘micro schools’, where multigrade classes, limited digital access, and scarce professional-development opportunities hinder innovation uptake. Koompai and Rakangthong (2022) highlight a widening urban–rural English gap. Targeting these schools honours SDG 10’s equity mandate and tests whether structured pedagogies can thrive under tight constraints (Chabundit & Krobsanthia, 2024).

Given the aforementioned background and research niches, this study aimed to 1) examine the effects of the EPIRIS model-based instructional innovation on students’ learning, 2) investigate the relationships between student motivation, engagement, interaction, and learning achievement when using the innovation, and 3) explore students’ and teachers’ perceptions and experiences with the EPIRIS-based innovation in grammar instruction. The research questions were as follows:

1. To what extent does the EPIRIS model-based instructional innovation significantly improve primary students’ learning achievement in English tense structures?
2. What is the relationship between student motivation, engagement, interaction, and their learning achievement in the EPIRIS intervention?
3. What are the students’ and teachers’ perceived experiences in using the EPIRIS model-based innovation to learn and teach English tense structures?

2. Literature Review

2.1 Challenges in Teaching English Grammar, Particularly Tense Structures, in EFL Contexts

Teaching English grammar, especially tense systems, presents significant challenges in EFL contexts. Students frequently memorize grammatical rules but struggle with practical application because of first-language interference and difficulty understanding aspectual distinctions (Gesa et al., 2023). Traditional teacher-centred approaches often fail to engage learners, who view grammar instruction as tedious. Although students may excel in controlled exercises, they struggle to apply correct tenses in authentic communication contexts. Common difficulties include selecting appropriate tenses, forming irregular verbs, and maintaining consistency in extended discourse (Sadri & Alvindi, 2025). These challenges are amplified in multilingual classrooms with limited English exposure, where learners lack meaningful practice opportunities and revert to native-language patterns (Mutolwa & Mwanza, 2025).

2.2 Cognitive and Constructivist Learning Theories Applied to Grammar Instruction

Contemporary grammar instruction draws from both cognitive and constructivist learning theories. Cognitive approaches view grammar learning as skill acquisition, progressing from explicit rule knowledge to automatic usage through practice and feedback (Zhao, 2019). These theories emphasize a manageable cognitive load and ‘noticing’ grammatical forms in context to facilitate intake and recall. Constructivist theory positions learners as active problem-solvers who build grammatical understanding through participation rather than passive reception. This approach leverages prior knowledge as a foundation for new concepts and encourages discovery learning through meaningful tasks (Zhao, 2019). Effective grammar instruction integrates both approaches, balancing explicit instruction with guided discovery to improve the accuracy and depth of grammatical knowledge.

2.3 Instructional Innovation in English Language Teaching (ELT)

ELT researchers have developed various instructional innovations to enhance grammar learning effectiveness and engagement. Technology integration, including Web 2.0 tools, has shown significant improvements in grammar scores and student motivation (Celik & Kara, 2024). The flipped-classroom approach, in which students preview content at home and practice interactively in class, has demonstrated superior achievement outcomes compared to traditional instruction (Bootsuwan et al., 2022). Creative pedagogies incorporating culturally based materials, such as local folklore stories for teaching the simple past tense, have yielded 24% improvement in grammar comprehension while increasing student enthusiasm (Sadri & Alvindi, 2025). These innovations address rote learning limitations by making instruction more interactive, meaningful, and aligned with real-world language use.

2.4 Models of Grammar Instruction: From Traditional to Integrated Frameworks

Grammar teaching has evolved from traditional form-focused models towards integrated frameworks. Traditional approaches like grammar-translation and presentation-practice-production often leave gaps between rule knowledge and spontaneous use (Gesa et al., 2023). Although many teachers still rely on explicit rule explanations and written exercises, integrated grammar instruction frameworks blend form-focused teaching with meaningful language use. Modern approaches recognize that grammar instruction is most effective when integrated with communication, so that learners understand form and meaning together (Tichachart, 2020). Contemporary frameworks like task-based language teaching and content-based instruction teach grammar through communicative contexts, yielding better transfer to real communication than traditional drills.

2.5 EPIRIS Model or Comparable Step-by-Step Instructional Models

The EPIRIS model (elicitation, presentation, innovation use, retention practice, interaction, and summary and assessment) represents a systematic framework for enhancing grammar instruction. Although a formal EPIRIS literature is still emerging, its components reflect established best practices. The cycle begins with eliciting prior knowledge, aligning with constructivist principles that view existing knowledge as the foundation for new learning (Zhao, 2019). Presentation involves the clear, contextualized introduction of grammar points. Innovation use encourages creative application beyond rote exercises, like the elaboration phases of other frameworks. Retention practice reinforces material through spaced review, supported by cognitive research demonstrating the need for multiple encounters with forms. Interaction emphasizes social learning through meaningful exchanges using target structures. Summary and assessment close the loop through reflection and formative evaluation. The EPIRIS model integrates cognitive, constructivist, and communicative techniques into one cohesive framework, positioning it as a promising approach to grammar instruction.

3. Method

3.1 Research Design

This study employed an explanatory sequential mixed-methods design to comprehensively examine the impact of EPIRIS model-based instructional innovation on primary students' learning achievement, motivation, and perceptions in relation to English tense structures. The research was structured in two sequential phases. First, quantitative data were collected and analysed through pretest-posttest measures and structured questionnaires to assess achievement gains and explore the relationships among motivation, engagement, and interaction. Following the quantitative phase, qualitative data were gathered using semi-structured interviews with selected students and teachers, enabling a deeper exploration of participants' experiences, perceived benefits, and implementation challenges. This design was chosen to allow quantitative results to guide and inform the qualitative inquiry, supporting robust interpretation and triangulation of findings (Creswell & Plano Clark, 2018).

3.2 Participants

There were 86 participants consisting of 66 primary school students, aged 9 to 12, and 20 English teachers from 10 participating small local schools in Sumut Sakhon province, Thailand. Student participants were drawn from mixed-ability classes and represented a range of English proficiency levels typical of the Thai primary EFL context. Although the participants were different in terms of ages and qualifications, they were new to the innovation with the EPIRIS model. Teacher participants were selected based on their involvement in the project's professional development programme and willingness to implement the EPIRIS model in their teaching. All participants and their guardians provided informed consent, and participation was voluntary. Besides, the researcher was the teacher of the training.

3.3 Research Procedures

The research was carried out in five main steps:

3.3.1 Pretest

All students completed a baseline assessment of English tense structures before any instructional intervention, establishing their initial achievement levels.

3.3.2 EPIRIS Intervention

Students then participated in a 12-hour instructional programme delivered over two weeks, with classes structured according to the EPIRIS model. Teachers received prior training and ongoing support to ensure consistent and faithful implementation of the model.

3.3.3 Posttest

Upon completion of the intervention, students took a parallel-form posttest to measure gains in their knowledge and application of English tense structures.

3.3.4 Questionnaire

After the posttest, students completed a validated questionnaire assessing motivation, engagement, and classroom interaction related to the intervention, as well as demographic information and open-ended questions about their learning experience.

3.3.5 Interview

A purposeful subsample of the students and participating teachers was invited for semi-structured interviews. These interviews explored perceptions of the instructional model, specific aspects of classroom experience, and suggestions for improvement.

3.4 Pretest and Posttest

Student achievement in English tense structures was measured using researcher-developed, parallel-form tests that included true/false and multiple-choice items. These tests were reviewed by three EFL assessment experts for content validity and piloted for reliability (Cronbach's $\alpha > .80$).

3.5 Motivation, Engagement, and Interaction Questionnaire

For motivation, the questionnaire items were developed from the Motivated Strategies for Learning Questionnaire (MSLQ) (Dörnyei, 1994). Items such as 'I want to learn English well so I can use it in real life' and 'I feel confident that I can understand and use English tenses', were rated on a five-point Likert scale (1 = Strongly disagree, 5 =

Strongly agree). For engagement, the questionnaire items were developed from Fredricks et al. (2004). Items included 'I participate actively in English class when we use new activities' and 'I pay attention when the teacher explains new grammar using the toolkit'. For interaction, the items were adapted from EFL classroom interaction scales. Sample items included 'I work together with my classmates to solve grammar problems' and 'Group activities make it easier to learn English tenses'.

3.6 Semi-Structured Interview

Separate interviews were developed for students and teachers, each aligned with the study's research questions and the EPIRIS framework. The student interview questions were aimed at exploring students' overall impressions of learning English tenses with the EPIRIS model, identifying which activities they found most enjoyable or beneficial, and probing changes in their motivation and confidence. The questions also sought to uncover any difficulties or challenges faced during the lessons and to understand how students collaborated with classmates and teachers throughout the activities. However, the teachers' interview questions focused on teachers' observations of the impact of the EPIRIS model on student learning and motivation, highlighting which instructional steps or activities were most effective or challenging to implement. Teachers were also asked to reflect on changes in student participation and confidence, as well as to provide suggestions for improving the model or instructional toolkit for future use.

A purposive sampling strategy was used to select interview participants in order to obtain explanatory depth on the quantitative trends observed in achievement, motivation, engagement, and interaction (Creswell & Plano Clark, 2018; Patton, 2015). Six students were invited to represent variation in posttest performance, self-reported motivation, and classroom participation: two students with relatively high posttest scores and high self-reported engagement, two students with mid-range scores and moderate engagement, and two students with lower scores or reported difficulty using English tenses in class. We also ensured a spread in age (9–12 years) and gender. All selected students had completed both the pretest/posttest and the questionnaire, and parental/guardian consent and student assent were obtained prior to interview. Four teachers were also purposefully selected from different participating schools to reflect a range of teaching experience (3–18 years), confidence in implementing the EPIRIS steps, and observed classroom interaction patterns. These teachers directly delivered the EPIRIS lessons during the intervention and therefore could comment on feasibility, learner response, and implementation challenges in authentic classroom conditions. This form of criterion-based, maximum-variation sampling was intended to capture contrasting perspectives rather than statistical representativeness (Patton, 2015).

3.7 Data Analysis

For quantitative analysis, descriptive statistical tools and mean and standard deviation were computed for all achievement and questionnaire data. Pretest and posttest scores were compared using paired-sample t-tests to determine the statistical significance of achievement gains. Correlational and regression analyses were used to examine relationships among motivation, engagement, interaction, and learning achievement. For qualitative analysis, interview transcripts were analysed using thematic analysis. Coding was both deductive (informed by the EPIRIS steps and motivation and engagement constructs) and inductive (allowing new themes to emerge from the data). Themes were mapped to specific EPIRIS stages to provide actionable insights for instructional practice.

3.8 Ethical Considerations

Ethical approval was obtained from the university's research ethics board. All students and teachers, as well as the parents of minor participants, provided informed consent or assent. Participation was voluntary and could be withdrawn at any time. Confidentiality and anonymity were strictly maintained through the use of pseudonyms and secure data storage. Findings were shared in aggregate to protect individual identities.

4. Results

4.1 Students' Learning Achievement in English Tense Structures Through EPIRIS Model-Based Instructional Innovation

To examine the extent to which the EPIRIS model-based instructional innovation improved primary students' learning of English tense structures, paired-sample t-tests were conducted on pretest and posttest scores for the 66 participating students. The mean pretest score was 10.52 ($SD = 3.40$), whereas the mean posttest score rose significantly to 16.62 ($SD = 1.53$) out of a maximum score of 20 as shown in Table 1.

Table 1. The Results of the Students' Learning Achievement Based on EPIRIS Model-Based Instructional Innovation

		Paired Differences			<i>t</i>	<i>df</i>	Sig. (2-tailed)	
	<i>M</i>	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pretest-Posttest	6.11	3.84	0.47	5.16	7.05	12.93	65	.000

Notes. This result of the paired sample t-test shows the students' pretest and posttest of EPIRIS Model-Based Instructional Innovation; *p*-value is < .001.

Students showed a statistically significant improvement in their mastery of English tense structures after the EPIRIS intervention. The mean score rose from 10.52 (*SD* = 3.40) on the pretest to 16.62 (*SD* = 1.53) on the posttest (out of 20), yielding an average gain of 6.11 points. A paired-samples t-test confirmed that this gain was significant, $t(65) = 12.93$, $p < .001$ (see Table 1). This indicates that a short, 12-hour EPIRIS-based sequence was sufficient to produce substantial growth in tense accuracy for primary learners in this context.

4.2 Relationships Among Participants' Motivation, Engagement, and Interaction in the EPIRIS Intervention

4.2.1 Descriptive Statistics of the Participants' Motivation, Engagement, and Interaction

The analysis examined questionnaire responses from 86 participants, including 20 English teachers and 66 primary school students aged 9–12 years. The 15-item questionnaire measured three affective constructs: motivation, engagement, and interaction, using a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Table 2. Mean, Standard Deviation, and Interpretation of Motivation, Engagement and Interaction Factors

Factors	<i>N</i>	<i>M</i>	<i>SD</i>	Minimum	Maximum	Interpretation
Motivation	86	3.71	0.51	2.80	4.50	High
Engagement	86	3.64	0.47	2.60	4.50	High
Interaction	86	4.60	0.35	3.80	5.00	Highest

Note. 4.51–5.00 = highest; 3.51–4.50 = high; 2.51–3.50 = neutral; 1.51–2.50 = low; 1.00–1.50 = lowest (Srisa-ard, 2017, p.121).

The results reveal that participants demonstrated positive to highly positive attitudes across all three constructs. Motivation scores averaged 3.71 on the 5-point Likert scale, indicating a high level of agreement, whereas engagement scores averaged 3.64, also reflecting high agreement. Interaction scores averaged 4.60, representing the highest level of agreement and indicating that participants strongly agreed with statements related to interactive learning behaviours. The standard deviations indicated reasonable variability across the participants, with interaction showing the least variance, suggesting more consistent positive responses to interactive learning experiences. To provide a more detailed understanding of participant responses, item-level analyses were conducted for each subscale. The following tables present descriptive statistics for individual questionnaire items within each construct.

Table 3. Motivation After Learning with the EPIRIS Model-Based Instructional Innovation

Item	Statement	<i>N</i>	<i>M</i>	<i>SD</i>	Level
1	I enjoy learning about English tense structures	86	3.68	0.72	High
2	I feel confident that I can understand and use English tenses	86	3.58	0.69	High
3	I am interested in lessons when my teacher teaches with the innovation	86	3.82	0.65	High
4	I feel proud when I can use the correct English tense in class	86	3.75	0.71	High
5	I like to challenge myself to learn new things in English	86	3.73	0.68	High
Overall Motivation		86	3.71	0.51	High

Note. 4.51–5.00 = highest; 3.51–4.50 = high; 2.51–3.50 = neutral; 1.51–2.50 = low; 1.00–1.50 = lowest (Srisa-ard, 2017, p.121).

Table 3 reveals that the overall motivation was at the high level. For motivation, Item 3 (interest in innovative teaching methods) received the most agreement ($M = 3.82$), whereas Item 2 (confidence in understanding English tenses)

showed the most conservative response ($M = 3.58$).

Table 4. Engagement After Learning with the EPIRIS Model-Based Instructional Innovation

Item	Statement	<i>N</i>	<i>M</i>	<i>SD</i>	Level
6	I participate actively in English class when we use new activities	86	3.71	0.74	High
7	I am interested in the stories or games about English tenses	86	3.78	0.69	High
8	I pay attention when the teacher explains the use of the innovation	86	3.69	0.71	High
9	I like to answer questions and share my ideas in English class	86	3.52	0.76	High
10	I finish my English homework or practice on time	86	3.50	0.73	Neutral
Overall Engagement		86	3.64	0.47	High

Note. 4.51–5.00 = highest; 3.51–4.50 = high; 2.51–3.50 = neutral; 1.51–2.50 = low; 1.00–1.50 = lowest (Srisa-ard, 2017, p.121).

Table 4 reveals that the overall engagement was at the high level. In the engagement subscale, Item 7 (interest in stories and games) generated the highest agreement ($M = 3.78$), whereas Item 10 (homework completion) fell into the neutral range ($M = 3.50$), suggesting this practical aspect may be more challenging for students.

Table 5. Interaction After Learning with the EPIRIS Model-Based Instructional Innovation

Item	Statement	<i>N</i>	<i>M</i>	<i>SD</i>	Level
11	I work together with my classmates to solve grammar problems	86	4.58	0.52	Highest
12	Group activities make it easier to learn English tenses	86	4.65	0.48	Highest
13	I help my friends when they do not understand the grammar lesson	86	4.52	0.55	Highest
14	I learn better when I talk about English tenses with others	86	4.62	0.49	Highest
15	I enjoy practicing English tenses in pairs or small groups	86	4.63	0.47	Highest
Overall Interaction		86	4.60	0.35	Highest

Note. 4.51–5.00 = highest; 3.51–4.50 = high; 2.51–3.50 = neutral; 1.51–2.50 = low; 1.00–1.50 = lowest (Srisa-ard, 2017, p.121).

Table 5 reveals that the overall engagement was at the highest level. Most notably, all interaction items achieved the highest level of agreement, with Item 12 (Group activities make it easier to learn English tenses.) receiving the strongest endorsement ($M = 4.65$). The consistency of high ratings across all interaction items (ranging from 4.52 to 4.65) reinforces the finding that the collaborative and interactive elements of the EPIRIS intervention were particularly valued by the participants.

4.2.2 Correlations Among the Participants' Motivation, Engagement, and Interaction

Pearson correlation coefficients were calculated to examine the relationships among the three affective constructs. The analysis revealed strong positive correlations among all measured variables.

Table 6. Correlation Among the Participants' Motivation, Engagement, and Interaction

Variable	Motivation	Engagement	Interaction
1. Motivation	1		
2. Engagement	.769**	1	
3. Interaction	.799**	.789**	1

** $p < .01$

The correlation analysis demonstrated robust positive relationships among all three constructs. The strongest correlation emerged between motivation and interaction ($r = .799$, $p < .01$), indicating that students with higher motivation levels consistently exhibited a greater willingness to participate in interactive learning activities. Similarly, engagement showed strong correlations with both motivation ($r = .769$, $p < .01$) and interaction ($r = .789$, $p < .01$). These substantial correlations suggest that the three constructs represent related but distinct dimensions of student attitudes towards the EPIRIS intervention.

The strong correlations among motivation, engagement, and interaction provide evidence for the convergent validity of

these constructs within the context of the EPIRIS intervention. The correlations ranged from .769 to .799, suggesting that although these constructs were closely related, they maintained sufficient distinctiveness to warrant separate measurement and analysis.

Significant differences were observed between teacher and student responses across all three affective constructs. Teachers consistently reported more positive attitudes than students across all measured dimensions.

Table 7. Correlations Between Participant Types and Factors

Factors	Teacher ($n=20$)		Students ($n=66$)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
1. Motivation	4.45	0.22	3.45	0.28
2. Engagement	4.35	0.18	3.40	0.26
3. Interaction	4.78	0.16	4.55	0.25

Teachers demonstrated consistently higher scores across all constructs, with motivation averaging 4.45 compared to 3.45 for students, engagement averaging 4.35 versus 3.40, and interaction averaging 4.78 versus 4.55 on the 5-point Likert scale. Notably, both groups showed the highest agreement levels for interaction, with teachers reaching near-maximum agreement and students also demonstrating strong agreement. Teachers showed lower variability in their responses, as evidenced by smaller standard deviations, suggesting more uniformly positive attitudes towards the EPIRIS intervention among educational professionals.

The substantial differences between teachers' and students' responses highlight the importance of considering participant perspectives when evaluating educational interventions. Teachers' uniformly positive attitudes may reflect their professional investment in the intervention's success, whereas students' responses provide insight into the actual learning experience.

In summary, student self-reports after the intervention suggested generally positive affective responses to the EPIRIS lessons. On a 5-point scale, students reported high motivation to learn English ($M = 3.45$, $SD = 0.28$) and high willingness to participate in classroom activities (engagement; $M = 3.40$, $SD = 0.26$). Perceived interaction with peers and teachers was the strongest dimension ($M = 4.55$, $SD = 0.25$), indicating that students experienced the lessons as highly collaborative (see Table 2). Correlational analysis showed strong positive associations among these constructs: students who reported higher motivation also tended to report greater engagement and more active interaction in class. Teachers, surveyed separately, rated motivation, engagement, and interaction even higher and with lower variability, suggesting that they viewed the EPIRIS implementation as consistently successful across their classrooms. Because teachers and students represent analytically distinct respondent groups, their data are reported separately and are not combined in inferential analysis.

4.3 Students' and Teachers' Perceived Experiences in Using the EPIRIS Model-Based Innovation in Learning and Teaching English Tense Structures

Semi-structured interviews were conducted with 10 purposively selected participants: six primary school students (ages 9–12) and four English teachers. Interview transcripts were analysed using both deductive and inductive thematic analysis. Deductive coding was informed by the EPIRIS model components and motivation-engagement constructs, whereas inductive coding allowed for emergent themes to surface from participant experiences. All quotes are presented anonymously to protect participant confidentiality.

The thematic analysis of interview transcripts revealed rich insights into the participants' lived experiences with the EPIRIS model-based innovation. Through iterative coding and constant comparison, six major themes emerged that captured both the transformative aspects of the learning experience and the practical realities of implementation. These themes demonstrate remarkable consistency between student and teacher perspectives while highlighting the multifaceted impact of the innovation on classroom dynamics, learning processes, and affective outcomes. The following themes represent the core experiences that shaped participants' engagement with the EPIRIS approach to English tense instruction.

4.3.1 Theme 1: Transformation from Passive to Active Learning

Both students and teachers emphasized a fundamental shift in classroom dynamics from traditional teacher-centred instruction to student-centred active learning. Students described increased agency in their learning process, whereas teachers observed enhanced student ownership and responsibility. A 12-year-old student explained,

It was much better than the old way. Before, we just memorized rules from the book, but with EPIRIS, we actually practiced using the tenses in real situations. The step-by-step approach helped me understand why we use different tenses, not just when to use them.

Teachers corroborated this transformation, with one teacher noting,

The model transformed my classroom dynamics completely. Students took ownership of their learning process and became more collaborative. Their retention of grammatical concepts improved because they were actively constructing knowledge rather than passively receiving it.

The systematic progression inherent in the EPIRIS model facilitated this transition by providing structured opportunities for student discovery and exploration rather than direct instruction of grammatical rules.

4.3.2 Theme 2: Enhanced Collaborative Learning and Peer Support

The interactive components of the EPIRIS model fostered unprecedented levels of peer collaboration and mutual support among the students. Participants consistently highlighted the value of group work, peer teaching, and collaborative problem-solving. A 10-year-old student described the collaborative environment:

We worked in small groups most of the time. My teacher walked around and helped us when we got stuck. My friends and I would discuss which tense to use and sometimes we disagreed, but then we would ask the teacher. It was nice because everyone could help each other.

Teachers observed substantial improvements in students' collaborative skills and willingness to support peers. One teacher remarked that the transformation was significant. Previously reluctant students began volunteering answers and helping classmates. They expressed increased metacognitive awareness – students could articulate their thinking processes. Group collaboration skills improved markedly.

The emergence of natural peer teaching behaviours created a supportive learning community in which students felt safe to experiment with language and learn from collective mistakes.

4.3.3 Theme 3: Reduced Anxiety and Increased Confidence

A remarkable finding across all participant groups was the substantial reduction in language learning anxiety and corresponding increase in confidence. Students reported feeling less fearful about making mistakes and more willing to take risks with language use. A 9-year-old student shared,

I feel happier about English now. Before, I thought English was too hard, but now I know I can learn it step by step. I like raising my hand more often now because I'm not so afraid of being wrong.

Teachers consistently observed this confidence building, with one educator explaining,

The change was dramatic. Students developed a growth mindset towards grammar learning. They began viewing mistakes as learning opportunities rather than failures. Peer teaching behaviours emerged naturally, creating a supportive learning community.

The scaffolded nature of the EPIRIS approach, which builds complexity gradually, appeared to be instrumental in developing this confidence through consistent experiences of success.

The thematic analysis revealed that the EPIRIS model-based innovation successfully transformed traditional grammar instruction into an engaging, collaborative, and meaningful learning experience. The systematic approach reduced student anxiety while building confidence through scaffolded success experiences (Tiang-uan, 2025). The emphasis on interaction and collaboration created supportive learning communities in which students felt safe to experiment with language.

In Summary, interview data from students and teachers supported the quantitative results and helped explain how the gains emerged. Participants described a shift from passive rule memorisation toward active use of tenses in meaningful tasks, frequent peer support during group work, and noticeably lower anxiety when producing language. Both groups emphasised that the step-by-step structure of EPIRIS and the opportunities to practise together increased confidence in using past tense forms during communicative activities. These perceptions suggest that the model functioned not only as a grammar sequence but also as a social learning environment that normalised risk-taking and error correction.

5. Discussion

The present study investigated the effects of EPIRIS model-based instructional innovation on English tense acquisition among primary school students in Samut Sakhon, Thailand, examining both cognitive and affective

outcomes through a mixed-methods approach. The findings demonstrated substantial improvements in learning achievement alongside highly positive participant experiences, providing initial evidence for the effectiveness of systematic, interactive approaches to grammar instruction in EFL contexts.

5.1 Learning Achievement Outcomes

The significant improvement in student achievement scores from pretest to posttest (Cohen's $d = 2.01$) represents a large effect size that exceeds typical educational intervention outcomes. This finding aligns with previous research demonstrating the superiority of structured, systematic approaches to grammar instruction over traditional methods (Ellis, 2006; Spada & Tomita, 2010). The mean gain of 6.11 points out of 20 possible points represents a 30.6% improvement in tense structure mastery, which is consistent with meta-analytic findings suggesting that explicit, form-focused instruction can yield substantial learning gains in EFL contexts (Norris & Ortega, 2000).

The effectiveness of the EPIRIS model can be attributed to its systematic progression from awareness through practice to application, which reflects principles of cognitive load theory (Sweller et al., 2011) and skill acquisition theory (DeKeyser, 2005). The scaffolded approach allowed students to build grammatical knowledge incrementally while reducing cognitive burden, facilitating the transition from declarative to procedural knowledge that characterizes successful language learning (Anderson, 1982). This finding supports previous research by Wong and VanPatten (2003) and Lee and VanPatten (2003), who demonstrated that structured input activities and systematic progression enhance grammatical development more effectively than traditional drill-based approaches.

The superior performance compared to traditional instructional methods resonates with constructivist learning theories that emphasize active knowledge construction over passive reception (Vygotsky, 1978). The EPIRIS model's emphasis on student discovery and exploration aligns with research by Fotos (2002) and Hedge (2000), who argued that grammar instruction should engage students as active participants in the learning process rather than passive recipients of linguistic rules.

5.2 Motivation, Engagement, and Interaction

The high levels of motivation ($M = 3.71$), engagement ($M = 3.64$), and particularly, interaction ($M = 4.60$), observed in this study support the growing body of research emphasizing the critical role of affective factors in second language acquisition (Dörnyei, 1994; MacIntyre et al., 2011). The exceptionally high interaction scores reflect the model's success in creating collaborative learning environments that students find intrinsically motivating, consistent with self-determination theory's emphasis on autonomy, competence, and relatedness as fundamental psychological needs (Deci & Ryan, 2000).

The strong positive correlations among motivation, engagement, and interaction ($r = .769$ to $.799$) provide empirical support for theoretical models proposing these constructs as interconnected components of successful language learning experiences (Gardner, 2010; Ushioda, 2008). These findings extend previous research by demonstrating that systematic instructional innovations can simultaneously enhance multiple affective dimensions, creating synergistic effects that amplify learning outcomes. The correlation patterns align with research by Henry and Cliffordson (2013) and Lamb (2012), who found that motivational constructs tend to cluster together in supportive learning environments.

The differential responses between teachers and students, with teachers consistently scoring higher across all measures, reflects patterns observed in previous educational research in which educators demonstrated greater enthusiasm for innovations than students initially experienced (Fullan, 2007). However, the consistently high student scores, particularly for interaction, suggest that the EPIRIS model successfully bridged the often-observed gap between teacher intentions and student experiences (Kubanyiova, 2012).

5.3 Perceived Experience in Learning Dynamics

The qualitative findings that revealed a transformation from passive to active learning echo extensive research on student-centred pedagogy and its benefits for language acquisition (Brown, 2007; Richards & Rodgers, 2014). The shift toward student agency and ownership observed in this study supports sociocultural theories of learning that emphasize the importance of active participation and social interaction in cognitive development (Lantolf & Thorne, 2006). This transformation aligns with research by Mitchell et al. (2013) and Lightbown and Spada (2013), who demonstrated that interactive, meaning-focused approaches to grammar instruction yield superior outcomes compared to traditional teacher-fronted methods.

The enhanced collaborative learning and peer support documented in the interview data support extensive research on cooperative learning in second language contexts (Johnson & Johnson, 2009; Slavin, 2014). The emergence of

natural peer teaching behaviours observed in this study reflects findings by Webb (1991) and King (1990), who demonstrated that collaborative learning environments foster metacognitive development and deeper understanding through explanatory activities. The creation of supportive learning communities aligns with research by Wenger (1998) on communities of practice and their role in facilitating knowledge construction through social interaction.

The substantial reduction in language learning anxiety and corresponding increases in confidence represent particularly significant findings given the well-documented negative effects of anxiety on second language acquisition (Horwitz et al., 1986; MacIntyre & Gardner, 1994). The scaffolded nature of the EPIRIS approach appears to address key sources of language anxiety by providing predictable structure, multiple opportunities for success, and supportive social environments. These findings support research by Young (1991) and Oxford (1999), who identified instructional factors that contribute to anxiety reduction in language learning contexts.

The development of growth mindsets based on grammar learning observed in this study aligns with research by Dweck (2006) and Mercer and Ryan (2010) on the importance of mindsets in academic achievement. The transformation of error perception from threatening events to learning opportunities reflects the successful creation of what Swain (2000) termed ‘collaborative dialogue’, where learners feel safe to experiment with language and learn from mistakes. This finding supports research by Ames (1992) and Pintrich (2000) on mastery-oriented learning environments that promote intrinsic motivation and resilience.

5.4 Comparison Between EPIRIS, PPP, and TBLT Instructional Models

The EPIRIS model provides a structured alternative to classic PPP (Presentation–Practice–Production) and to Task-Based Language Teaching (TBLT) by combining explicit form work with meaningful use. In PPP, teachers present a target form, learners practise it through controlled exercises, and then produce it more freely; this linear sequencing gives teachers strong control over pacing and accuracy but is often criticised as behaviourist and teacher-centred, with limited alignment to natural acquisition processes (Carless, 2009).

TBLT, by contrast, organises instruction around meaningful tasks in which learners communicate to achieve goals before or alongside explicit grammar focus, which tends to heighten engagement and motivation (Carless, 2009). EPIRIS (Elicitation, Presentation, Innovation, Retention, Interaction, Summary/Assessment) extends beyond both models by adding systematic activation of prior knowledge, technology- or material-supported innovation, spaced retention practice, and structured peer interaction (Karanjakwut et al., 2025).

Pedagogically, it preserves PPP’s clarity in introducing form while incorporating TBLT’s emphasis on interaction and communicative purpose. Classroom evidence suggests that this staged integration supports higher learner participation and more durable mastery of tense structures (Karanjakwut et al., 2025; Carless, 2009).

The present findings also indicate that EPIRIS functions through a deliberately ordered sequence of pedagogical mechanisms rather than generic “active learning.” Elicitation first activates learners’ existing knowledge and reveals misconceptions, consistent with constructivist views of building new grammatical understanding on prior mental representations (Zhao, 2019). Presentation then offers explicit, form-focused input that supports the shift from declarative to procedural knowledge in tense use (Anderson, 1982; DeKeyser, 2005; Lee & VanPatten, 2003; Wong & VanPatten, 2003). Innovation and Retention provide supported practice and spaced rehearsal, which manage cognitive load and strengthen recall (Sweller, 1994; Mayer, 2009; Sweller et al., 2011). Interaction requires learners to use the target tense collaboratively for meaningful communication (Swain, 2000; Johnson & Johnson, 2009; Slavin, 2014), and Summary/Assessment promotes reflection and self-regulation (Ames, 1992; Pintrich, 2000). This sequencing — cognitive scaffolding feeding into social use and metacognitive consolidation — is what distinguishes EPIRIS in this primary EFL context.

6. Conclusion and Implications

This study offers initial evidence that EPIRIS model-based instructional innovation may enhance primary students’ learning of English tense structures in this Thai EFL context. The observed gains in test performance, together with positive reports of motivation, engagement, and reduced anxiety, suggest that a systematic, interaction-oriented approach can support both cognitive and affective outcomes in grammar instruction.

The findings also suggest several practical priorities for teacher professional development in similar primary EFL settings. First, training should focus on helping teachers plan and pace the EPIRIS sequence itself: how to activate prior knowledge, deliver concise form-focused input, and then move deliberately into innovation, retention, interaction, and formative summary within one lesson cycle. This is not typically addressed in conventional grammar workshops, which emphasise rules rather than lesson orchestration. Second, teachers may benefit from coached rehearsal of

interaction management — for example, how to set up small-group grammar talk, prompt peer explanation, and correct tense errors in ways that lower anxiety rather than discourage participation, since students in this study reported increased confidence when error correction was supportive and collaborative. Third, professional development should include low-resource adaptation: creating or reusing simple materials for the Innovation and Retention stages (e.g., timelines, mini-dialogues, peer drills) and building routines for quick in-class formative assessment, so that the model is feasible in rural classrooms without heavy technology. These forms of practice-based, context-responsive support align with research arguing that sustainable pedagogical change depends on ongoing, classroom-embedded coaching rather than one-off theoretical workshops (Fullan, 2007; Kubanyiova, 2012).

A few limitations warrant consideration, including the study's specific cultural context (rural Thailand), relatively short intervention period, and absence of alternative innovative instruction control groups, which may limit the generalizability and specificity of findings. Future research should investigate the long-term sustainability of learning gains, conduct comparative studies with other innovative approaches across diverse cultural contexts, and examine individual difference factors that may moderate EPIRIS effectiveness. Additionally, research determining the optimal duration and intensity of EPIRIS-based instruction would provide essential guidance for curriculum developers and educational policy makers considering reforms to traditional approaches to grammar instruction.

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