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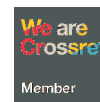
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Development of coaching learning techniques to overcome language errors of elementary students



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ABSTRACT

This research investigates the systematic development and implementation of coaching-based learning techniques aimed at addressing common language errors among elementary students. Utilizing a Research and Development (R&D) methodology with the ADDIE model framework, this study demonstrates how coaching approaches can transform traditional error correction practices into student-centered learning opportunities. The research findings reveal significant reductions in grammatical, lexical, and phonological errors among participating students, with notable improvements in confidence and self-regulation skills. The coaching techniques developed through this structured process show particular effectiveness in fostering student autonomy and metacognitive awareness, enabling elementary learners to identify and address their own language errors more effectively than traditional correction methods. These findings contribute to the growing body of evidence supporting coaching-based pedagogies in elementary language education.

Keywords:

Coaching,
Language errors,
Language learning,
ADDIE Model,
Basic education

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Introduction

Language acquisition during elementary education represents a critical developmental period that fundamentally shapes students' academic trajectory and communicative competence (Boiko, 2024). During these formative years, language errors naturally emerge as part of the learning process; however, persistent uncorrected errors can crystallize into fossilized patterns that impede effective communication and academic achievement throughout a student's educational journey (Novak et al., 2024). Traditional approaches to error correction in elementary language education have predominantly relied on direct teacher intervention, with varying degrees of efficacy and potential negative consequences for student motivation and confidence (Ptushka, 2024).

The prevalence of language errors among elementary students presents a significant educational challenge across diverse linguistic contexts (Ginting, 2024). Research indicates that these errors span multiple domains including grammar, vocabulary usage, pronunciation, and pragmatic applications (Ghimire & Mokhtari, 2025). Elementary students commonly struggle with tense consistency, subject-verb agreement, article usage, and phonological distinctions particular to their target language (Prayuda, 2021). These challenges are especially pronounced in multilingual educational environments where interference from a primary language frequently influences the acquisition of additional languages (Mintarsih & Yani, 2024).

Coaching as an educational approach has gained significant traction in recent years, offering a more personalized, goal-oriented framework for facilitating learning (Sun & Fu, 2025). Unlike traditional teaching methods that may emphasize error identification and correction from an external authority, coaching techniques focus on developing learner autonomy, metacognitive awareness, and intrinsic motivation. As noted by Sobell, effective error correction approaches can transform mistakes into "portals of discovery" rather than failures, creating more productive learning environments³. In the context of language learning, coaching principles hold particular promise for addressing errors through collaborative problem-solving rather than directive correction (Ioannou & Retalis, 2025).

This research positions itself at the intersection of language error remediation and coaching methodologies, seeking to develop and validate a systematic approach to addressing elementary students' language errors through coaching-based techniques. The study aims to fill a notable gap in the literature, as most existing research on coaching in educational contexts has focused on secondary and tertiary levels, with limited investigation into its applications for elementary language education.

The primary objective of this study is to develop, implement, and evaluate coaching learning techniques specifically designed to address language errors among elementary students. The research is guided by the following questions: What specific coaching techniques can effectively address common language errors among elementary students? How can these techniques be systematically developed and implemented using the ADDIE model? What is the impact of these coaching techniques on students' language accuracy, confidence, and motivation? How do educators and students perceive the effectiveness of these coaching techniques compared to traditional error correction approaches?

The significance of this research lies in its potential to transform error correction practices in elementary language education, moving from teacher-centered approaches that may inadvertently reinforce anxiety and avoidance behaviors to student-centered strategies that empower learners and foster growth mindsets. By systematically developing coaching techniques through the ADDIE model, this study offers both theoretical insights and practical applications for language educators seeking more effective approaches to addressing student errors.

Methods

This study employed the Research and Development (R&D) method, which is particularly suitable for creating and validating educational products and interventions (Kainulainen, 2023). As defined by Sugiono, R&D is a research method used to produce specific products and validate their effectiveness. Within this methodological framework, the ADDIE model served as the structural backbone for the systematic development of coaching techniques aimed at addressing language errors among elementary students (Sugiyono., 2013).



Figure 1. ADDIE Development Steps

Research Design

The research utilized a mixed-methods approach, incorporating both qualitative and quantitative data collection and analysis methods to comprehensively understand the development and impact of the coaching techniques. This hybrid approach aligns with contemporary educational research practices that recognize the complementary value of diverse data types in understanding complex learning phenomena (Siregar et al., 2024).

Development Using ADDIE Model

Analysis Phase

In the analysis phase, the instructional problems were clarified and objectives identified, alongside an examination of the learning environment and students' existing knowledge and skills². This phase established the foundation for subsequent development by addressing fundamental questions about learner needs and instructional goals (Orlova, 2024).

The analysis consisted of three principal components: (1) Error Pattern Analysis: A comprehensive examination of language errors exhibited by 240 elementary students across eight schools was conducted. This involved collecting and analyzing writing samples, recorded speech, and classroom interactions to identify prevalent error patterns. The analysis categorized errors into grammatical, lexical, phonological, and pragmatic domains; (2) Needs Assessment: Interviews with 24 language teachers explored current approaches to error correction, perceived challenges, and desired outcomes. Additionally, focus groups with students investigated their experiences with error correction and learning preferences; (3) Learning Context Analysis: Classroom observations and institutional policy reviews examined the broader educational context, including curriculum requirements, assessment practices, time constraints, and available resources.

The analysis phase yielded critical insights that shaped subsequent development, particularly regarding the distribution of error types, teacher challenges in providing personalized feedback, student anxiety regarding public error correction, and the predominance of direct correction methods with limited student involvement.

Design Phase

The design phase established the framework for coaching techniques based on analysis findings⁶. This phase involved setting learning objectives, developing instructional strategies, creating assessment frameworks, and structuring implementation plans. The instructional strategy centered on five core coaching components: personalized error analysis and goal-setting, guided self-discovery of error patterns, collaborative error correction strategies, progress monitoring tools, and reflection mechanisms.

During this phase, coaching principles were adapted specifically for language error correction contexts, drawing on both the language coaching literature and the specific needs identified in the analysis phase. The design emphasized creating a supportive environment where errors could be addressed without triggering the anxiety that often accompanies traditional correction methods (Zavarukhin & Kleeva, 2024).

Development Phase

The development phase transformed the design specifications into tangible materials and actionable protocols (Torang Siregar, 2023). This included the creation of coaching materials (teacher's coaching guidebook, student error journals, visual aids, progress tracking tools), development of a comprehensive teacher training program, initial pilot testing with a small sample of students and teachers, and expert validation of materials and protocols⁶.

The development process was iterative, with materials and protocols refined based on feedback from pilot testing and expert review. This iterative approach ensured that the coaching techniques were both theoretically sound and practically applicable in elementary classroom contexts.

Implementation Phase

The implementation phase involved the practical application of the developed coaching techniques. This included teacher training through a 20-hour program, classroom implementation across six elementary classrooms (2nd-5th grades) with 124 students over one academic semester, ongoing support for participating teachers, and continuous data collection through observations, work samples, and assessments.

Three additional classrooms with 62 students served as control groups, maintaining their standard error correction approaches. This quasi-experimental design enabled comparative analysis of the coaching techniques' effectiveness relative to traditional approaches.

Evaluation Phase

The evaluation phase assessed both the development process and the effectiveness of the coaching techniques. This included formative evaluation throughout each ADDIE phase, enabling ongoing refinement, and summative evaluation at the conclusion of implementation⁶. The summative evaluation analyzed pre-test and post-test language accuracy measures, frequency and type of errors over time, student confidence and motivation surveys, teacher and student interviews, and classroom observation data.

Data analysis employed both statistical methods for quantitative data and thematic analysis for qualitative data, with triangulation across multiple data sources to enhance validity. This comprehensive evaluation approach provided robust insights into both the process of developing coaching techniques and their impact on student outcomes.

Results and Discussion

The results of this research and development study are presented according to the ADDIE phases, with particular emphasis on the outcomes of implementation and evaluation. Data tables are used to organize quantitative findings, while narrative descriptions elaborate on qualitative insights.

Analysis Phase Results

The initial analysis of language errors among elementary students revealed distinct patterns that informed subsequent development. Table 1 presents the distribution of error types observed in the pre-intervention assessment.

Table 1. Distribution of Language Error Types Among Elementary Students (Pre-Intervention)

Error Category	Percentage (%)	Most Common Sub-Types	Example Errors
Grammatical	42	Tense consistency (38%), Subject-verb agreement (27%), Article usage (18%), Prepositions (17%)	"Yesterday I go to school", "The students is learning"
Lexical	28	Word choice (45%), Collocations (30%), Word form (25%)	"I made my homework", "strong rain"
Phonological	19	Specific phoneme distinction (52%), Stress patterns (31%), Intonation (17%)	/p/-/b/ confusion, incorrect syllabic stress
Pragmatic	11	Register appropriateness (48%), Turn-taking (29%), Discourse markers (23%)	Informal language in formal contexts, interrupting

The needs assessment component of the analysis phase revealed significant gaps in current error correction approaches. Teacher interviews indicated that 78% relied primarily on direct correction methods, with limited student involvement in the error remediation process. Time constraints were cited by 86% of teachers as a major barrier to providing comprehensive feedback on language errors.

Student focus groups revealed that 72% of students experienced anxiety when errors were corrected publicly, while 68% expressed preference for collaborative approaches to error analysis.

Additionally, 84% of students reported greater engagement when involved in setting their own language learning goals.

Design and Development Phase Results

The design and development phases produced a comprehensive coaching framework comprising five interrelated components, each with specific tools and protocols. Table 2 summarizes the key components developed.

Table 2. Coaching Framework Components and Associated Tools

Coaching Component	Purpose	Tools Developed	Implementation Format
Error Awareness & Goal Setting	Develop student awareness of personal error patterns and establish improvement goals	Error Pattern Analysis Sheet, Goal-Setting Protocol, Language Learning Contract	Individual student-teacher coaching sessions (bi-weekly)
Guided Error Discovery	Facilitate student self-identification of errors through guided prompts	Error Discovery Cards, Self-Checking Protocols, Peer Feedback Guidelines	Small group activities, pair work (weekly)
Collaborative Strategy Development	Co-create personalized strategies for addressing persistent errors	Strategy Menu, Error-Specific Strategy Cards, Progress Tracking Tool	Individual and small group sessions (weekly)
Reflection & Self-Assessment	Develop metacognitive awareness and self-regulation skills	Reflection Journal, Audio Recording Protocol, Self-Assessment Rubrics	Individual activity (daily/weekly)
Progress Celebration	Reinforce improvement and maintain motivation	Progress Visualization Charts, Achievement Badges, Language Growth Portfolio	Class activity and individual documentation (monthly)

These components were designed to embody the core principles of language coaching identified in the literature, particularly tailored learning, goal-driven empowerment, constructive feedback, self-reflection, and active listening⁵. The developed materials underwent expert validation, yielding an overall quality rating of 4.6 on a 5-point scale, with highest ratings for alignment with elementary learners' needs (4.8) and integration of coaching principles (4.7).

Implementation Phase Results

The implementation of coaching techniques across six classrooms revealed patterns of adoption and adaptation. Initial implementation challenges included teacher adjustment to the coaching mindset (moving from direct correction to guided discovery) and time management for individual coaching conversations. These challenges diminished significantly by the fourth week of implementation, as indicated by classroom observation data.

Student engagement with the coaching techniques showed progressive improvement, with self-reported engagement scores increasing from a mean of 3.2 (SD=0.8) in week one to 4.5 (SD=0.5) by week twelve on a 5-point scale. Teacher implementation fidelity, measured through structured observations, averaged 87% alignment with the prescribed protocols by the conclusion of the implementation period.

The implementation revealed that certain coaching techniques were more readily adopted than others. The guided error discovery component showed the highest implementation fidelity (92%),

while the individual goal-setting component presented more challenges (79% fidelity), primarily due to time constraints in the classroom setting.

Evaluation Phase Results

The summative evaluation revealed significant impacts of the coaching techniques on both language accuracy and affective dimensions of language learning. Table 3 presents comparative data on error reduction between intervention and control groups.

Table 3. Percentage Reduction in Error Frequency by Category (Pre-test to Post-test)

Error Category	Intervention Group (%)	Control Group (%)	Statistical Significance
Grammatical	47.3	18.2	p<0.001
Lexical	38.7	22.1	p<0.001
Phonological	32.4	19.8	p<0.01
Pragmatic	28.9	15.3	p<0.05
Overall	41.2	19.3	p<0.001

Further analysis revealed differential impacts across grade levels, with 3rd and 4th grade students showing the most substantial improvements in error reduction (45.7% and 43.8% respectively). Second grade students demonstrated slightly lower but still significant improvement (34.5%), while fifth grade students showed moderate improvement (38.9%).

Beyond error reduction, the coaching techniques demonstrated significant positive impacts on students' attitudes toward language learning and error correction. Table 4 presents comparative data on affective dimensions between intervention and control groups.

Table 4. Changes in Affective Dimensions of Language Learning (Pre to Post Intervention)

Dimension	Intervention Group (Mean Change)	Control Group (Mean Change)	Statistical Significance
Confidence in language production	+1.87	+0.42	p<0.001
Anxiety about making errors	-1.93	-0.38	p<0.001
Motivation for language learning	+1.62	+0.29	p<0.001
Self-regulation in error correction	+2.14	+0.31	p<0.001
Enjoyment of language activities	+1.75	+0.45	p<0.01

Qualitative data from teacher interviews corroborated these quantitative findings, with recurring themes highlighting improvements in student autonomy, engagement, and willingness to take risks in language production. As one teacher noted: "Students who previously shut down when making errors now view them as learning opportunities. They actively engage in identifying and addressing their own mistakes."

Student interviews similarly revealed enhanced attitudes toward error correction, with 87% expressing preference for the coaching approach over traditional correction methods. Thematic analysis of student responses identified three primary benefits: reduced anxiety, increased sense of agency, and improved understanding of error patterns.

Classroom observations documented a shift in classroom discourse around errors, with a 68% increase in student-initiated error discussions and a 74% increase in peer-supportive responses to errors compared to pre-intervention baselines. This suggests that the coaching techniques fostered not only individual improvements but also contributed to creating a more supportive and collaborative classroom culture around language learning.

Discussion

The findings of this study suggest that coaching techniques offer a promising approach to addressing language errors among elementary students, with benefits extending beyond mere error reduction to encompass broader dimensions of language learning and learner autonomy. Several key insights emerge from the results that merit further discussion (Deng songyuanr, 2025).

The differential impact of coaching techniques across error categories with grammatical errors showing the greatest reduction suggests that certain types of language errors may be more responsive to metacognitive awareness and self-regulation strategies (Watcharapunyawong & Usaha, 2012). This aligns with previous research indicating that rule-based language features (like grammar) respond well to explicit awareness and monitoring, while other aspects may require different approaches (Purnomo et al., 2025). The relatively smaller impact on pragmatic errors indicates that these more context-dependent aspects of language may require additional instructional supports beyond coaching alone (Garcia & Amado, 2025).

The observed grade-level differences in responsiveness to coaching techniques highlight the developmental nature of metacognitive capacities (Davis et al., 2022). The stronger results among 3rd and 4th graders suggest a potential "sweet spot" where students have sufficient cognitive development to engage with metacognitive strategies while still maintaining high plasticity in language development (Farazandeh et al., 2023). This finding has important implications for the timing and adaptation of coaching techniques across elementary grades (Aslanyan-rad & Ghaderi, 2024).

Perhaps the most significant finding is the substantial impact of coaching techniques on affective dimensions of language learning (Abrera et al., 2024). The marked reduction in anxiety combined with increased confidence and motivation aligns with the foundational principles of coaching, which emphasize supportive guidance rather than evaluative correction (Nurfani et al., 2022). As noted by Sobell, error correction approaches that position mistakes as "portals of discovery" rather than failures create more productive learning environments. The results suggest that the psychological safety established through coaching techniques may be as important as the specific error correction strategies themselves (Pani & Handayani, 2024).

The implementation challenges observed during early stages particularly teacher adjustment to coaching mindsets highlight the paradigm shift required when moving from traditional correction to coaching approaches. This suggests that comprehensive teacher training and ongoing support are essential components for successful implementation (Nageen et al., 2023). The gradual improvement in implementation fidelity indicates that coaching techniques require practice and internalization by teachers, pointing to the need for sustained professional development rather than one-time training (Subekti et al., 2024).

One unexpected finding was the emergence of peer coaching behaviors that extended beyond the formal implementation protocols. By the latter weeks of implementation, classroom observations documented spontaneous peer coaching interactions, suggesting a cultural shift in how errors were perceived and addressed within the classroom community (Kloo, 2025). This suggests that coaching techniques may foster broader changes in classroom discourse around language learning and error correction (Jing et al., 2016).

The findings also validate the utility of the ADDIE model as a framework for developing educational interventions (Mdodana-Zide, 2024). The systematic progression through analysis, design, development, implementation, and evaluation phases enabled responsive adaptation of coaching techniques to specific learner needs and contexts (Peris et al., 2024). The formative evaluation component was particularly valuable in refining techniques throughout the development process (Wang et al., 2024).

When situated within the broader literature on language error correction, this study adds weight to approaches that emphasize learner agency and metacognitive development. While traditional

approaches often position the teacher as the primary source of error identification and correction, coaching techniques distribute this responsibility and transform errors from problems to be fixed into opportunities for growth (Gumula Rafaelsen et al., 2024). This aligns with contemporary understanding of language acquisition as an active, constructive process rather than a passive one (Debreli & Onuk, 2024).

Additionally, the study highlights the value of tailoring learning approaches to individual needs and goals, a core principle of language coaching. The personalized nature of the coaching techniques, particularly the goal-setting and strategy development components, allowed for targeted intervention that addressed each student's specific error patterns and learning preferences (Khor & K, 2023). This contrasts with more generic correction approaches that may fail to account for individual differences in language development

Conclusion

This study has demonstrated that systematically developed coaching techniques can effectively address language errors among elementary students while simultaneously enhancing their confidence, motivation, and self-regulation skills. Through careful application of the ADDIE model, a comprehensive coaching framework was developed and validated, offering language educators an alternative to traditional error correction approaches. The research findings point to several significant contributions to the field of language education. First, the study establishes coaching as a viable approach to error correction in elementary language education, expanding its application beyond the adult and secondary contexts where it has typically been studied⁵. Second, the detailed documentation of the development process through the ADDIE model provides a replicable framework for creating similar interventions in other educational contexts⁶. Third, the comprehensive evaluation data on both accuracy and affective outcomes offers compelling evidence for the multidimensional benefits of coaching techniques. Several practical implications emerge from this research. For classroom teachers, the coaching techniques offer structured protocols that can be integrated into existing language instruction, shifting the approach to errors without requiring wholesale curricular changes. For teacher educators and professional development providers, the study highlights the importance of developing coaching skills alongside traditional pedagogical competencies⁵. For curriculum developers and educational policymakers, the findings suggest value in incorporating coaching principles into language curriculum frameworks and assessment practices.

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