Implementing Cognitive Apprenticeship in EFL Classrooms: "A New Paradigm for Enhancing English Language Teaching in Iraqi Secondary Schools"

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Abstract

This research examines the use of the Cognitive Apprenticeship Model (CAM) as a pioneering teaching method to improve the teaching of English in secondary schools in Iraq. Based on the principles of situated learning theory and constructivism, this study focuses on different components of the model (i.e. modeling, coaching, scaffolding, articulation, reflection, exploration) and how each of these may best be fitted to teaching English as a foreign language. The study critiques the use of traditional teaching practices and advocates for teaching practices that are interactive, that are student-centered, and that foster authentic learning and language use. The study integrates theory and practice in a way that, from a holistic perspective, cognitive models of apprenticeship may help to close the gaps that currently exist between theory and practice in teaching English as a second language. The study concludes that the implementation of CAM helps students to become more self-directed and proficient in English and

provides for the greater engagement of teachers in their teaching. Some suggestions are offered as to how the CAM model can be incorporated into the curriculum and structured within teacher professional development initiatives in Iraq.

ملخص البحث

تبحث هذه الدراسة في استخدام نموذج التلمذة المعرفية (CAM) كمنهج تعليمي ريادي يهدف إلى تطوير تدريس اللغة الإنجليزية في المدارس الثانوية في العراق. وبالاستناد إلى مبادئ نظرية التعلم الموقفي والنظرية البنائية، تركز الدراسة على المكونات المختلفة لهذا النموذج، وهي: (النمذجة، التدريب، الدعم التعليمي "السقالات"، التعبير، التأمل، والاستكشاف)، وكيفية ملاءمة كل منها لتدريس اللغة الإنجليزية بوصفها لغة أجنبية بأفضل صورة ممكنة.

تنتقد الدراسة الممارسات التدريسية التقليدية المتبعة حالياً، وتدعو في المقابل إلى تبني ممارسات تفاعلية تتمحور حول الطالب، وتعمل على تعزيز التعلم الأصيل والاستخدام الفعلي للغة. كما تدمج الدراسة بين الجانبين النظري والتطبيقي بطريقة تُظهر، من منظور شمولي، كيف يمكن لنماذج التلمذة المعرفية أن تساهم في سد الفجوات القائمة حالياً بين النظرية والتطبيق في تدريس اللغة الإنجليزية كلغة ثانية.

وتخلص الدراسة إلى أن تطبيق نموذج التلمذة المعرفية يساعد الطلاب على أن يصبحوا أكثر كفاءة وتوجيهاً ذاتياً في تعلم اللغة الإنجليزية، كما يتيح للمعلمين مشاركة أعمق في عمليات التدريس. وتختتم الدراسة بتقديم مجموعة من المقترحات حول كيفية دمج هذا النموذج في المناهج الدراسية، وهيكلة استخدامه ضمن مبادرات التطوير المهني للمعلمين في العراق.

1. Introduction

In Iraq, teaching of English as a foreign language continues to be dominated by old-fashioned, teacher-centered methodologies. English language teaching, in spite of deferring innovations in teaching methodologies, continues to favour old techniques such as rigid

memorization, grammatical exercises, and translation exercises, offering little space for students to use the target language. As a result, students often lack critical and communicative competencies required to succeed in today's world (C & S, 2014).

Collins, Brown, and Newman (1989) present a constructive model, known as Cognitive Apprenticeship (CA), that offers a positive alternative approach. The guiding principles of this model revolve on learning as a result of guided experiences, where learners have the opportunity to observe exemplary performances, receive feedback on their performances, undertake steps to improve, and reflect on their learning in order to take full control of their learning. CA is ideal in EFL situations since it promotes language learning through authentic communicative situations and scaffolded activities (Collins, S, & E, 1989).

The contribution of CA to the teaching of EFL, especially in developing countries, is gaining significant attention. Li and Wang (2021) noted the absence of interactive activities in classrooms, as a result, teaching and learning becomes a one-way street. They correlate the absence of interactive activities to the failure of the cognitive apprenticeship model, as students fail to concentrate on communicative activities. This absence of interactive activities underscores the necessity to abandon rote learning in favour of apprenticeship models (Li & Wang, 2021).

This study focuses on the challenges and prospects of implementing CA in EFL teaching in Iraq.

It investigates the potential of this method in enhancing student engagement, critical thinking, and language acquisition. The study also examines the theoretical foundations of CA, analyzes pertinent literature,

describes the research methodology, and contextualizes the findings within the Iraqi education system.

2. Theoretical Framework

2.1 Traditional Approaches in Iraqi EFL Classrooms

Across many secondary schools in Iraq, EFL instruction still primarily relies on the Grammar-Translation Method (GTM). This method involves the rote memorization of English grammar rules and the translating of English texts into Arabic. While this might help students gain some understanding of the rules of English grammar, it does not, however, help develop the students' overall ability to communicate in the use of the English language. Given the lack of opportunities to engage in any meaningful practice of speaking or listening during class, the students' learning is not adequately prepared for any practical use of the language in real life. The growing dominance of Task-Based Language Teaching (TBLT) and Communicative Language Teaching (CLT) approaches in EFL worldwide are centered, and, ideally, better suited to address the situation. However, in Iraq, the use of these approaches is still very much restricted. A number of factors have contributed to this situation, including inflexible curricula, inadequate teacher preparation, excessive emphasis on testing, and the number of students in each class. (C & S, 2014).

Because of these factors, even when teachers are aware of the most modern approaches, they tend to revert to more traditional approaches such as GTM, which are less flexible. The lack of flexibility is definitional for this issue. The primary issue is that there is a clear need for more effective models of instruction that are able to promote language learning and also fit

existing conditions in Iraq. In this regard, Cognitive Apprenticeship is likely to have a promising effect, as it incorporates elements of scaffolding, mentorship, and real-world practice. (Collins, S, & E, 1989)

2.2. **Foundations of Cognitive Apprenticeship**

The first introduction of Cognitive Apprenticeship to the educational discourse was by Collins, Brown, and Newman (1989). The framework draws inspiration from a model of a traditional craft apprentice, where the novice learns to become the expert by watching and then gradually participating in the process.

CA seeks to drive cognitive activities, such as thinking, planning, problem-solving, and strategizing, to the surface to make them teachable. Unlike most types of teaching that compartmentalize theory from practice, CA integrates learners into real activities, along with expert feedback.

The model comprises six essential elements:

- Modeling: The teacher demonstrates how to approach a task or problem, making thinking strategies explicit.
- Coaching: While students attempt similar tasks, the teacher provides support, feedback, and hints.
- Scaffolding: Support is gradually reduced as learners gain independence and confidence.
- Articulation: Students are asked to state the reasoning behind their decisions.

- Reflection: Students measure the effectiveness of their methods by contrasting them with the methods of their peers or an expert.
- Exploration: Students test their learning in new and novel contexts to promote the concept of transferability. (Collins, S, & E, 1989)

All of these principles are consistent with learning constructivism and learning socio-cultural theory with special reference to Vygotsky (1978) and his Zone of Proximal Development (ZPD) theory, which underlines the role of collaboration and assistance in the construction of knowledge. (S V. L., 1978)

2.3. Relevance to EFL in Iraq

The CA model in Iraqi secondary schools has the potential to convert the traditional passive language learning into the active use of the language in a case. Instead of merely translating a reading passage, a teacher can demonstrate how to summarize it in English, and then guide the students to do the same and then let them do it in pairs. After a series of scaffolding, students learn to internalize (Collins, S, & E, 1989) language and the process itself. The same goes for the local cultural values which deeply respect mentorship, dialogue, and learning which is Buffered. The model is flexible which gives it the potential to serve the purpose of the textbooks, the national exams, and at the same time, it alleviates the students from the burden of rote learning.It can be utilized with a variety of resources, from high-tech to low-tech, and flexible in its integration with role plays, problem solving, project based learning, and collaborative learning (Lave & Wenger, 1991).

Furthermore, CA fosters the development of metacognitive skills, which are also neglected in Iraqi classrooms. It is important that students learn how to regulate and reflect on the process. The more students learn to reflect this way, the more they develop as autonomous, confident, and strategic learners. This transformation is crucial, not only for language proficiency, but also for fostering a lifelong learning propensity (S V. L., Mind in Society, 1978).

3. Literature Review

3.1. Overview of Cognitive Apprenticeship in Education

Cognitive Apprenticeship (CA) has emerged as a prominent framework in educational literature that has focused on situated learning, expert modeling, and guided participation. (Collins, S, & E, 1989).

Differing from conventional instruction, which divorces learning from its real world applicability, CA embeds knowledge within authentic activities and social transactions, thus, closely adhering to Vygotsky's (1978) Zone of Proximal Development. (S V. L., Mind in Society, 1978) .

Research in the field has confirmed the validity of CA as a means to achieve a higher level of understanding and longer memory retention. For example, in a technology–enhanced learning environment, Herrington and Oliver (2000) reported that the application of CA improved students' engagement and performance. (Herrington & Oliver, 2000) .

In a compliant manner, Brown and Campione (1996) noted that in CA classrooms, students demonstrated higher levels of strategic thinking and collaboration than students in traditional classrooms(L & C, 1996).

3.2. CA in Language Learning Contexts

In second language acquisition (SLA), CA has been applied to enhance lively and purposeful language learning activities. Donato (2000) contended that CA enables learners to collaboratively construct knowledge in social environments which fosters the internalization of specific linguistic forms and communicative strategies. Activities such as guided writing, modeled reading, peer editing, and teacher scaffolding, mimic authentic language use and foster fluency (Donato, 2000).

Park's (2011) study of Korean EFL learners demonstrates that CA-based instruction significantly improved speaking confidence and grammatical accuracy. The scaffolding process empowered learners to speak at risk and gradually lessen teacher support (Park, 2011).

In the same way, Min (2006) demonstrated that CA in writing instruction assisted learners in achieving cohesion and clarity through several rounds of feedback and revision (T, 2006).

3.3. Middle East and Regional Applications

In Middle Eastern countries, the use of CA has started to be researched within the context of environments dominated by traditional methods. In Saudi EFL classrooms, Alrabai (2014) acknowledged the potential of CA components such as modeling and coaching to close the gap between theoretical and communicative knowledge. However, he underscored the importance of teacher education and insufficient institutional support as an impediment to the effective use of these resources. (Alrabai, 2014)

In Iran, Zarei and Rahimi (2014) observed improved student organizational skills, critical thinking, and peer collaboration when applying CA strategies in an academic writing course.The model phases of CA supported students' better ownership of the learning process as they progressively shifted from more guided to more autonomous writing tasks.

Although research on CA in Iraq is still in its infancy, findings from other countries within the same geographical proximity suggest CA is adaptable to the Iraq context. The socio-cultural proximity and the educational problems within the Iraq context suggest the model may address most of the problems detected in the Iraqi EFL classrooms. (A & Rahimi, 2014)

Recently, Kumar and Rao (2022) undertook a comparative study in which they analyzed the operationalization of cognitive apprenticeship and task-based learning in Indian EFL classrooms. According to their findings, whereas TBLT primarily promotes fluency, cognitive apprenticeship adds a dimension of critical thinking and, therefore, suffice to say, it is a more holistic approach to language learning from a long-term perspective. (Kumar & Rao, 2022)

3.4. Challenges in Implementing CA

Although the merits of CA are salient, certain obstacles to the application of CA exist, particularly in EFL contexts. First, the method is very teacher-intensive. Teachers need to be well versed in the language content, and in addition, they need to learn how to scaffold, law, manage, meta, and collab the cognitive processes. (Herrington & Oliver, 2000).

Second, the rigidity of the curricular framework, examination driven instruction, and a lack of adequate time to teach are institutional obstacles toward the full realization of CA. In many educational contexts, including

Iraq, teachers deal with large class sizes and inadequate teaching materials which makes it difficult to provide individualized coaching and reflection. (Alrabai, 2014)

Finally, the lack of acceptance of CA may be the result of entrenched cultural beliefs surrounding education.

When it comes to teacher-centered systems, students are not used to exercising autonomy, peer working, and open-ended tasks. These obstacles can be overcome by gradual integration, professional development, and administrative support.

3.5. Summary of the Literature

The literature has shown the positive impact of CA in promoting learner autonomy, engagement, and strategic competence. CA has been used in EFL contexts, both internationally and regionally, and has had positive impact on learners' speaking, writing, and comprehension skills. Despite the difficulties, the model's flexibility lends it to potential use in attempts to restructure language education in Iraq.

The present review indicates the requirement for context-sensitive implementation and, in doing so, it paves the way for the current study that examines the response of Iraqi EFL teachers and students to the practice of Cognitive Apprenticeship in actual classroom situations.

4. Methodology

4.1.Research Design

Zhang (2023) identifies modern educational technologies as one of the tools integrated with cognitive apprenticeships. One of the studies that focused on the fusion of the internet and the six cognitive apprenticeship

(modeling, coaching, scaffolding, articulation, reflection, and exploration) frameworks was found to facilitate learner engagement and learner autonomy in EFL classrooms in China. (Zhang, 2023)

In this research, the author analyzes the use of Cognitive Apprenticeship (CA) as a qualitative case study in Iraqi secondary schools EFL classrooms. The case study method is the most appropriate method for exploring educational innovations in practice. For this research, the author chose a bounded system, which is a set of Iraqi secondary school English teachers and students, to examine how the principles of CA are integrated into EFL classroom practices and how the participants (teachers and students) perceive that integration (K, 2014)

The intricacies of teaching, such as modeling, coaching, and scaffolding, which are the core constituent parts of CA, are best studied using qualitative case studies. The author aims to provide a comprehensive description of the relationships among teaching methods, learning, and student behaviors using classroom observations, interviews, and document reviews.

4.2. Participants and Context

Data collection took place in a pair of public secondary schools in Diwaniya, Iraq. The schools were chosen for their accessibility, the willingness of teachers to take part in the research, and their representation of a typical classroom setting. The research participants consisted of: English language teachers (2 males, 2 females) with teaching experience 4 from 7 to 15 years.

10th-grade students (aged 15–16) who were enrolled in EFL classes during the 32 the study.

The schools utilized the national English curriculum and the Ministry of Education sanctioned textbooks. There were 30 to 35 students in each class, and teaching was done in a combination of Arabic and English.

4.3.Data Collection Tools

Three primary tools were employed to collect data:

Classroom Observations: EFL sessions were audio-recorded for 45 minutes per session. An observation checklist which contained items regarding the various components of CA was used to figure out the various instances of modeling, coaching, and scaffolding, and student articulation.

Semi-structured Interviews: Three teachers were interviewed, and the purpose of the interview was to collect data on teachers' understanding of CA, instructional strategies, and how the students responded. There were also follow-up interviews with eight students, who were selected randomly, and the purpose of those interviews was to obtain data on students' experiences.

Teaching Materials and Lesson Plans: Handouts, copies of lesson plans, and teaching materials were collected in order to assess the extent to which CA strategies and real-world activities were incorporated.

All tools were tested in advance and adjusted in relation to the context and for clarity. Interviews were conducted in Arabic and subsequently translated into English for the purpose of data analysis.

4.4. The Procedures for Data Analysis

Using the thematic coding method, data were analyzed per Braun and Clarke’s (2006) inductive thematic analysis.

The observation notes and the transcripts were coded by hand, and the emerging sub-themes were classified into the six components of CA. For instance, teacher demonstrations were coded as Modeling, while instances of peer feedback were coded as Articulation or Coaching, depending on the context.

The data sources (interviews, observations, documents) were check with one another in order to achieve triangulation which increases the reliability and validity of the qualitative data(S & E, 1985).

To minimize bias, two independent reviewers participated in the coding process and discrepancies were resolved through discussion.

4.5. CA Training and Implementation Protocol

To make the Cognitive Apprenticeship (CA) concept understandable to the students through the classrooms, the researcher prepared and facilitated a structured intervention. The protocol was a means of conceptual understanding and practical implementation by teachers of all six components of the CA model, particularly the stages of Articulation, Reflection, and Exploration, which are less frequently used. Pre-Implementation Training Phase: The four teachers of the study underwent a 16-hour intensive workshop over two consecutive days. The training was divided into four modules: 1) Foundations of CA, presenting the six-component model and its theoretical basis in situated learning; 2) Demonstrating and Guiding, focusing on Modeling, Coaching, and Scaffolding strategies through video analysis and micro-teaching; 3) Fostering Metacognition, concentrating on the creation of tasks that provoke Articulation and structured Reflection; and 4) Lesson Planning for

Autonomy, which was about developing open-ended Exploration tasks with the national curriculum.

Teachers cooperated in transforming a conventional textbook unit into a CA-based lesson plan, which was their implementation guide. Researcher's Role: The researcher was a trainer and a participatory observer in this project. As all teachers were given a copy of a lesson plan template and a self-monitoring checklist of CA components by the researcher after the workshop, the researcher was able to document all 32 sessions conducted during the 4-week implementation phase. In addition to recording, the researcher provided brief, post-lesson consultations to assist teachers in resolving issues, particularly those pertaining to the handling of Articulation prompts and Reflection sessions within a 45-minute time frame. Practical Implementation: According to the observations, teachers were to integrate at least three core CA components into each lesson, aiming to gradually incorporate all six during the specified time frame. Initially, the focus of the lessons was predominantly on Modeling and Scaffolding. By the middle of the time frame, the work also included explicit Coaching and Articulation prompts (e.g., "Explain to your partner why you used this verb tense."). The final phase focused on attempts at peer reflection and brief, exploratory application tasks. The staged approach acknowledged the need for time for teachers to become familiar with the new pedagogy.

4.6. Ethical Considerations

The research followed standard ethical guidelines. Study participants were informed about the aim of the research and provided informed consent. Participants who were students also secured consent from their parents. To ensure confidentiality of participant records, data were de-identified, and

pseudonyms were assigned. Participants were free to choose whether or not to participate, and they had the right to withdraw from the research at any time, without any penalty.

4.7. Limitations of the Study

The scope of insight the study has on the implementation of CA also has constraints. To begin with, the small sample size restricts the level of generalizability. The findings of this research only echo the observations of the context in which the research was carried out, and as such, they are not universally applicable to the entirety of the school system in Iraq. The second issue is that the interview data is self- reported and therefore, they may contain bias. Additionally, the study was constrained by time and therefore was not able to assess changes in learner performance over a longer duration.

Nonetheless, despite these constraints, the case study offers value in that it provides a foundation for understanding the functioning of Cognitive Apprenticeship within the framework of EFL classrooms in Iraq, as well as the potential for guiding subsequent more extensive research.

5. Analysis and Discussion

5.1.Overview of Data Analysis

Anderson and Kim's (2022) meta-analysis shows cognitive apprenticeship and the use of reflection and articulation outperform traditional teacher-centered methods in secondary education for collaborative problem-solving and language retention. (Anderson & Kim, 2022).

This chapter shares thematic results regarding classroom observation, teacher and student interview, and document review. Results are aligned to six of the components of Cognitive Apprenticeship (CA) model: Modeling, Coaching, Scaffolding, Articulation, Reflection, and Exploration. (Collins, S, & E, 1989).

Each theme is illustrated with excerpts from the qualitative data, to reflect the application, or lack thereof, of the CA model in the Iraqi EFL classrooms.

5.2. Modeling: Making Thinking Visible

All four teachers exhibited effective strategies for modeling. During the vocabulary lessons, teachers modeled activities involving reading paragraphs with students, while emphasizing certain words, and in grammar instruction, they wrote the different structures on the boards and explained the different components and usage of the structures one step at a time.

For instance, one teacher explained:

"I always write the full sentence and show students how to break it down grammatically. If they see the logic, they will understand better." Teacher A

This represents an application of the CA principle of making cognitive strategies visible to learners.

(Collins, S, & E, 1989)

Students mentioned that this method enhanced their understanding of not only “what” to do, but also “how” to do it, which is exemplary of expert modeling.

5.3. Synthesis of Key Constraints

Table 1 provides an overview of the different ways the CA model has been implemented, which is not due solely to the lack of pedagogical knowledge. The evidence shows that there were considerable systemic and contextual elements that not only impacted but also constrained the practitioners severely. The Tyranny of the Examination Culture. The most dominant constraint which was most influential was the national system of high stakes examinations. Teachers reiterated that components like Exploration and Reflection were "luxuries" they could not afford (Teacher D). The exams, which emphasize discrete grammar points and vocabulary recall, thus, act as a strong deterrent against open-ended tasks and metacognitive activities that do not yield a direct, immediate payoff in test scores. Consequently, a pedagogical compromise was reached, in which the visible, transmission-oriented components of CA (Modeling, direct Coaching) were selected because they could be presented as efficient test preparation, whereas the student-centered, process-oriented components were left out.

Table 1: Observed Implementation of Cognitive Apprenticeship Components

CA Component	Observed Frequency	Qualitative Description & Exemplar Quote	Implication for Learning
Modeling	Very High	Clear, repeated demonstrations of grammar and vocabulary. "I always	Strong foundation for

		write the full sentence and show students how to break it down..." (Teacher A)	initial understandin g.
Coaching	Moderat e	Reactive; primarily in response to raised hands. Limited proactive guidance. "When the teacher stands next to me... I feel more confident." (Student 3)	Fosters dependence; limits widespread skill development.
Scaffoldi ng	Moderat e	Present in early task stages, but release of responsibility was often abrupt. "I try to help less... but they still want me to check every sentence." (Teacher C)	Hinders transition to learner autonomy.
Articulati on	Low	Mostly elicited through closed teacher questions. Rare student-led explanation. "He said past perfect, but couldn't explain why..." (Teacher B)	Metacognitive skills remain underdevelop ed.
Reflectio n	Absent	No structured opportunities for self or peer-assessment. "We finish the task and move to the next. There is no time to look back." (Student 7)	Limits ability to generalize and adapt strategies.
Explorati	Absent	No observed open-ended or creative application tasks. "We are tied to the	Prevents transfer of

on		textbook and national exams." (Teacher D)	skills to novel situations.

Structural Impediment of Large Class Sizes: Thirty to 35 students in a classroom made the ideal CA process of individualized, adaptive Coaching and gradual Scaffolding very difficult from a logistical point of view. Teacher B said, "I want to give each student feedback, but by the time I get to the fifth desk, the first ones have finished and are distracted." Such an atmosphere naturally pushed teachers to whole-class instruction (Modeling) and limited, reactive coaching.

The promise of personalized support vanishes when a teacher has to cater to the different ZPDs of 36 students within a fixed time, thus, the implementation of these core CA strategies being only partial is unavoidable.

Institutional Inertia and Resource Constraints: Institutional Inertia and Resource Limitations: One of the major problems recognized in the research was the absence of a well-structured institution that supports innovation. The teachers had to work in isolation, and there was no time set aside for collaborative planning. Also, the stiff and heavy curriculum required the quick covering of the content, thus a few minutes were left for the iterative cycles of practice, reflection, and exploration that CA demands. These institutional issues deepened the traditional teaching structure, which made the continuation of innovation the very personal task of the individual teacher who was motivated.

5.4.Coaching: Guiding Performance

The presence of coaching was evident but inconsistent across teachers. Some instructors walked around the classroom during activities, offering personalized feedback, while others remained at the front and responded only to raised hands.

Observations showed that students who received immediate support during tasks improved their performance more significantly than those who worked alone. As one student shared:

"When the teacher stands next to me and explains again, I feel more confident to continue." (Student 3)

This aligns with Donato's (2000) findings that social interaction and guided support promote confidence and competence in EFL learning. (Donato , 2000)

5.5.Scaffolding: Support with Gradual Release

Scaffolding was frequently observed in writing activities. Teachers would first brainstorm ideas with students, then write a model paragraph together, and finally ask students to produce their own text. However, the withdrawal of support—the essence of scaffolding—was sometimes abrupt or unclear.

One teacher noted:

"I try to help less in the second activity, but they still want me to check every sentence." (Teacher C)

This suggests that while initial support was present, some students lacked the strategies to operate independently—an issue also discussed by Herrington and Oliver (2000), who emphasize the importance of well-planned transition phases in scaffolding.

5.6.Articulation: Verbalizing Thought

Students had few chances to express what they had learned. Only two teachers consistently invited students to elaborate on their reasoning or make certain grammatical explanations. In one class, a student was requested to explain one verb tense, and the conversation was revealing both understanding and lack thereof.

"He said past perfect, but couldn't explain why. I used the board to draw a timeline and asked others to help." (Teacher B)

Such encounters highlight the role articulation plays in facilitating deeper reasoning. Verbalizing thought, as Vygotsky (1978) posits, helps to 'make' and 'keep' them.

5.7.Reflection: Evaluating and Comparing

The absence of structured reflection was remarkable. Teachers seldom invited students to assess their performance relative to their peers or to evaluate their performance. Interviews corroborated that students were not used to such thinking, particularly with language.

"We finish the task and move to the next. There is no time to look back." (Student 7)

This absence of reflection constrains the scope of metacognitive development. As Brown and Campione (1996) note, reflection helps learners to identify and reapply strategies and become aware of their learning processes.

5.8.Exploration: Independent Language Use

Exploration, the most advanced CA stage, was mostly absent. Tasks had a high degree of structure and students were offered few opportunities to transfer what they had learned to a new or unfamiliar context.

Instances of project-based learning, creative writing, and other open-ended activities have not been documented.

Teachers cited as primary barriers the constraints of time and the pressures of exams.

"We are tied to the textbook and the national exams. There is no time for projects or creative tasks." (Teacher D)

Such a viewpoint resonates with Alrabai (2014), who pointed out that cultures oriented toward exams tend to restrict the use of learner-centered approaches.

5.8. Summary of Findings

The data showed that although modeling and initial scaffolding were widely practiced in Iraqi EFL classrooms, the levels of articulation, reflection, and exploration were disproportionate. Teachers possessed some understanding of principles of CA, especially modeling and coaching, but were devoid of systematic approaches to the subsequent stages of the model.

Such disparity might account for the students' overreliance on teachers and a lack of self-sufficient use of English. There is a pressing need for professional training, institutional backing, and flexibility within the curriculum to facilitate successful implementation of CA in Iraq.

6. Conclusions and Recommendations

6.1.Summary of Key Findings

Nguyen (2024) states the most recent studies in EFL pedagogy highlight the need for systematic teacher training for the implementation of cognitive apprenticeship. Training needs to prepare teachers for contexts such as Iraq which are dominated by traditional methods in terms of how they combine guiding learner autonomy with active learner participation. (L N. T., 2024).

This study sought to evaluate the application of the elements of cognitive apprenticeship (CA) in teaching EFL in Iraqi classrooms, and for this purpose, sought to evaluate the elements of CA, specifically the extent to which modeling, coaching, scaffolding, articulation, reflection, and exploration were undertaken.

The results include the following:

Most teachers practiced modeling and initial scaffolding, particularly with the teaching of grammar and vocabulary. Students were able to benefit from examples that were structured and from exercises that were guided.

Coaching, while present, was inconsistent. Some teachers provided feedback during the task, while others remained passive during the student activities.

Students were not encouraged to engage in articulation and reflection, thus they were not able to develop their self-awareness as thinkers and to explain the processes involved in their thinking.

The most significant absence of exploration in the CA model stemmed from rigid curriculum requirements, time restrictions, and no institutional backing.

While some CA components fit the EFL practices in Iraq, the current state of implementation suggests the need for greater depth, breadth, and consistency to achieve the desired change in pedagogy.

6.2. Pedagogical Implications

The findings of the study present some avenues for improvement with teaching English in Iraq:

1. Teacher Development: There should be proximal and differentiated training for teachers in the stages of CA. Workshops and in-service training will assist teachers in learning to do more exposition, reflective prompting, and the gradual transfer of responsibility to students.
2. Curriculum Flexibility: Textbook-based rigid teaching does not allow for exploration and imaginative teaching. Curriculum developers need to allow for a variety of tasks that promote individual thinking, group and pair learning, and actual communication.
3. Assessment Reform: Current national exams are overly weighted for rote learning and correct grammatical formulation. CA classroom practices will be more likely to occur if exams are designed to include a speech, a written piece, and a reflective component.
4. Institutional Support: To implement CA principles, school administrators and policy makers need to reduce the number of students per class, allow for more creative teaching, and provide time for teachers to collaborate professionally.

6.3.Recommendations for Practice

Based on the findings, the following practical steps are recommended:

Teachers should begin each new concept with a modeled demonstration and provide guided support before expecting independent student work.

Teachers should regularly ask students to explain their thinking aloud to foster articulation.

Structured reflection activities—such as learning journals or peer review—should be integrated into lessons.

Group tasks and projects should be added to allow for exploration and application of English in real-life scenarios.

6.4. Recommendations for Systemic Support

For Cognitive Apprenticeship to continue as a sustainable pedagogical paradigm after being a promising intervention, the proposals should not be limited to the classroom only but should also cover the systems that influence it.

١. Assessment Reform as a Catalyst:

The Ministry of Education of Iraq must bring the single most impactful change. A sustainable pedagogical shift cannot be achieved when the assessment system rewards contradictory skills. We suggest a pilot reform that aims at integrating performance-based assessment components into the national EFL exams. This may involve:

scored speaking interview emphasizing narrative or description. A reflective writing task where students assess and revise a given. An interdependent problem-solving activity evaluated in a school-based setting. Such reforms would provide a strong signal, rearranging teaching priorities and making the time devoted to Articulation, Reflection, and Exploration legitimate.

2. Building Sustainable Support Structures:

Professional Learning Communities (PLCs): One-off workshops should be left behind. Schools should schedule regular PLC meetings for EFL teachers to co-design CA-focused lessons, exchange classroom videos, and analyze student assignments. This does create an enduring support community for the innovation of practices.

Instructional Coaching. Think about the potential of adopting peer or specialist coaching frameworks. A lead teacher or district coach could do class visits and, non-evaluatively, provide feedback around advocacy for CA and other practices that support articulation, reduction of scaffolds, etc.

2. Constructive Allocation of Resources.

Apart from the class size reduction, which is a long-term endeavor, there are immediate, practical ways to support this. One of these is the preparation and provision of resource kits that contain materials for cooperative work, reflection checklists, and samples of exploration tasks that align with the curriculum. Supplying these concrete instruments decreases implementation resistance due to lack of time, for teachers who are under pressure.

6.5.Recommendations for Further Research

To deepen understanding of CA in EFL contexts, future research should consider:

Conducting longitudinal studies to examine the long-term effects of CA-based instruction on student autonomy and performance.

Comparing classrooms that use CA systematically with those using traditional methods to measure student outcomes across skills.

Exploring students' perceptions of CA practices and how they relate to motivation and engagement.

Investigating the feasibility of CA integration in rural and underserved schools with limited resources.

6.6.Final Reflection

Cognitive Apprenticeship provides a robust and logically consistent concept for revamping EFL teaching in Iraq by shifting it from content delivery to skill development. The present research indicates that the teachers are capable and willing to implement parts of the model. However, its full potential is limited by a system which frequently, though unintentionally, penalizes those practices that lead to deep learning and learner independence.

Hence, the major change in teaching method that is put forward here depends not only on teachers' willingness but also courage from institutions and systemic realignment. It starts with the teachers who take the bold steps to exemplify thinking and provide support for understanding. Nevertheless, for this undertaking to reach the goal of independent, proficient English language users, it requires backing from a transformed assessment setting that considers process as equally important as product, as well as school cultures that foster ongoing professional collaboration.

The new paradigm for Iraqi EFL is not just another method of teaching, but a new educational compact-one in which the system is designed to assist the complicated, subtle task of apprentice young minds.

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Appendix A: Exemplar CA-Integrated Lesson Plan Topic:

Writing a Short Narrative Paragraph (Grade 10)

Objective: Students will be able to write a coherent 5-sentence narrative paragraph using the past simple tense, incorporating temporal connectors. CA Components in Sequence:

Modeling (10 mins): The teacher presents a brief paragraph on "My First Day at School." Through the use of a think-aloud method, the teacher clarifies the writing task: "First, I have to find a topic sentence. I am going to start with 'I will never forget my first day at school.' Next, I have to put the events in order. Which connector shows sequence? 'First,...' Then I have to give more details for each event." The teacher demonstrates the mental writing process by revealing how he/she selects the tense, vocabulary, and structure.

Coaching & Scaffolding (15 mins): Students are provided with a prompt ("A Memorable Trip"). They collaborate in pairs to determine the sequence of the trip's events. Meanwhile, the teacher circulates and gives targeted feedback ("Good start. Can you add an adjective to describe the 'car'?") and at the same time offers a paragraph structure template as a scaffold.

Support is personalized; some groups get a word bank, while others are encouraged to add sensory details.

Articulation (7 mins): Two original pairs each combine to form a group of four. One student from each pair is explaining their planning process to the new group: "We chose 'exciting' for our trip because we went to the mountains. We used 'then' after the first event because it shows what happened next."* This is a way of compelling the reasoning to be made explicit.

Reflection (8 mins): A simple checklist (e.g., Past tense? Time connectors? Clear sequence?) is offered to groups. They exchange their draft paragraphs with the other group and use the checklist to give the feedback. Finally, teacher prompts: "Look at the feedback you received. What is one thing you did well and one thing to improve in your final draft?"

Exploration (5 mins - Homework Assignment): For independent exploration, students are assigned to apply the identical narrative structure to write a new topic of their choice (e.g., "A Funny Family Moment" or "A Challenging Experience") without the help of the structured template, thereby transferring the practiced skills to a new context.