The Role of Cognitive-Code Method on Iraqi EFL Pupils' Academic Motivation Enhancement

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ARTICLE INFO	ABSTRACT
	This study examines how Iraqi EFL students' academic motivation is affected by the Cognitive-Code Method (CCM). The purpose of the study aims to determine if structured cognitive learning techniques and explicit grammar instruction improve students' internal and extrinsic motivation. A control group received instruction using conventional methods, whereas an experimental group was taught using the Cognitive-Code Method as part of a quasi-experimental design. Following the treatment, a post-questionnaire was given to each group. To assess variations in motivation levels, the data were analyzed using item-total correlation and the T-test formula. According to the results, students in the experimental group were substantially more engaged and intrinsically motivated than those in the control group. The experimental group showed an enhanced knowledge of language structures, a deeper level of cognitive involvement, and a greater enthusiasm for learning, even if extrinsic motivation was identical in both groups. These findings support theories of cognitive learning by highlighting the ways in which explicit rule-based education promotes critical thinking, meaningful comprehension, and active engagement. Furthermore, the study emphasizes that students who were exposed to the Cognitive-Code Method had a higher chance of acquiring self-motivation, problem-solving skills, and a favorable attitude toward language acquisition. According to the study's findings, including the Cognitive-Code Method into EFL lessons can significantly enhance students' motivation and interest. In order to promote in-depth learning and a sustainable interest in language acquisition, it

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advises instructors to implement structured cognitive techniques. These results highlight the value of cognitive-based methods in teaching foreign languages since they provide an organized and interesting way to raise motivation and enhance learning results.

Keywords: Cognitive-Code Method, Psychological Mechanisms.

1. INTRODUCTION

1.1 The Study's Background

Students' learning outcomes in the field of English as a Foreign Language (EFL) are greatly influenced by their academic motivation. Students' willingness to interact with the course materials, take part in class activities, and stick with language learning in the face of difficulties is determined by their motivation. Higher motivation levels have been repeatedly linked to better language acquisition, greater memory of linguistic structures, and an increase in overall competency, according to research (Dörnyei, 2005; Gardner, 2010). However, traditional teaching approaches that mostly focus on rote memory and passive learning cause many EFL students to struggle with poor motivation (Ryan & Deci, 2000).

A method of teaching languages called the Cognitive-Code Method places a strong emphasis on knowing grammar principles explicitly before using them in meaningful conversation. The Cognitive-Code Method enables students to actively and methodically integrate linguistic structures, in contrast to communicative or direct methods that primarily focus on fluency (Richards & Rodgers, 2014). By promoting a deeper comprehension of the language system, boosting students' confidence, and lowering their fear related to language use, this methodical approach may help them become more motivated.

This study explores whether using the Cognitive-Code Method in an Iraqi EFL classroom setting increases students' motivation in comparison to traditional instructional methods, even though prior research has focused on the method's effects on language comprehension and retention, but its effect on students' academic motivation is still poorly understood.

1.2 Problem Description

Many Iraqi EFL students still lack enthusiasm to study English, even with improvements in teaching techniques. Conventional approaches, which prioritize memorization, translation exercises, and mechanical drills, frequently fall short in maintaining students' interest or promoting intrinsic motivation (Al-Sobh, 2018). Students may therefore view English as a challenging and uninteresting

topic, which could result in low persistence, low participation, and poor learning outcomes.

With its focus on rule awareness, logical explanation, and structured learning, the Cognitive-Code Method may offer a solution to this problem. By assisting students in comprehending the "why" behind language rules, the method may encourage increased levels of motivation, engagement, and self-efficacy in EFL learning. However, little research has been done in the Iraqi educational context to assess the Cognitive-Code Method's efficacy in enhancing academic motivation.

By examining how the Cognitive-Code Method affects students' academic motivation in a fifth level EFL classroom, this study seeks to close this gap. This study aims to ascertain whether the Cognitive-Code Method promotes higher motivation, more effort, and better attitudes toward language learning by contrasting students taught using this method with those taught using conventional techniques.

1.3 Research Hypotheses

Based on theoretical frameworks and prior research, the study formulates the following hypotheses:

- *Students taught using the Cognitive-Code Method show significantly higher academic motivation compared to those taught with traditional methods.*

1.4 Research Aim

To explore how the Cognitive-Code Method influences student engagement and motivation in language learning.

2.LITERATURE REVIEW

2.1 The Concept of Academic Motivation in Language Learning

2.1.1 Definition of Academic Motivation

Motivation is an important component of the educational process since it influences both the teacher's and the student's performance. The research aimed to identify the relationship between motivation and academic achievement in order to contribute to the enhancement of educational quality. According to Fernández-Espínola and Almagro (2019), motivation is a key component influencing learning in educational institutions globally.

The psychological mechanisms that guide and maintain a student's participation in educational activities are referred to as academic motivation. The amount of work and perseverance a student puts into learning a second language is determined by their motivation (Dörnyei, 2005). Three elements

make up motivation in second language acquisition, according to Gardner (2010):

1. Effort: The readiness to devote time to education.

2. Desire – The internal drive to achieve proficiency.

3. Attitude – The emotional response toward learning the language.

Multiple studies have found that a high level of motivation is positively correlated with improved academic performance; thus, understanding how motivation influences learning and performance is critical for designing effective educational strategies (Korthagen et al., 2006; Mishra et al., 2020). At the practical level, the study has important implications for teachers, parents, and students, as understanding how to motivate can help to improve the quality of the teaching-learning process. Furthermore, the knowledge can be used by teachers to develop specific pedagogical practices targeted at generating a pleasant learning environment that promotes motivation (Lin et al., 2003; Pedaste et al., 2015).

2.1.2 Intrinsic vs. Extrinsic Motivation

Intrinsic motivation (IM) often refers to the act of performing an activity for its own sake as well as the enjoyment and fulfillment that come from doing so (Deci, 1975; Deci and Ryan, 1985). A student who attends class because learning more about a particular subject interests and fulfills them is an example of IM. According to Deci and Ryan, IM arises from the basic psychological requirements of self-determination and competence. As a result, people will once again freely engage in activities outside of instant messaging that enable them to feel such emotions.

Although the majority of scholars believe that instant messaging is a universal construct, certain theorists (Deci, 1975) have suggested that IM may be divided into more specialized motivations. Regretfully, these writers have not specified which IM classes are derived from the broader IM concept. There has been a recent proposal for a three-tiered taxonomy of intrinsic motivation (Vallerand, Blais, Brière, and Pelletier, 1989). This taxonomy is based on the literature on instant messaging, which identifies three distinct forms of IM that have each been studied separately. These three categories of instant messaging can be distinguished as IM for information, task completion, and excitement.

Extrinsic motivation (EM), as opposed to intrinsic motivation (IM), refers to a wide range of activities that are carried out   as a means to an end rather than for their own purpose. Deci, Ryan, and colleagues (1985, 1991) postulated three types of EM based on self-determination.
External regulation, introjection, and identification are the three levels of self-determination in order

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of decreasing to increasing. External regulation correlates to EM as it is commonly described in the literature. That is, conduct is regulated by external factors like as rewards and restrictions. For example, a student may say, "My parents force me to study the night before exams."

Introjected regulation allows the individual to internalize the causes for his or her actions. However, this type of internalization, while internal to the individual, is not completely self-determined because it is confined to the internalization of past external events. Thus, the individual might say, "I study the night before exams because that's what good students are supposed to do." Identification regulates the internalization of extrinsic motives to the extent that the behavior is valued and judged important for the individual, particularly when it is perceived as chosen by oneself. The individual might say, for instance: "I've chosen to study tonight because it is something important for me."

2.1.3 Amotivation

Deci and Ryan (1985) suggest that understanding human behavior requires taking into account a third type of motivation, in addition to intrinsic and extrinsic motivation. This idea is referred to as amotivation. Individuals are unmotivated when they do not see a link between outcomes and their own actions. They are neither intrinsically nor extrinsically motivated. When amotivated individuals experience feelings of incompetence and expectancies of uncontrollability.

They perceive their behaviors as caused by forces out of their own control. They feel undeceived, and start asking themselves why in the world they go to school. Eventually they may stop participating in academic activities.
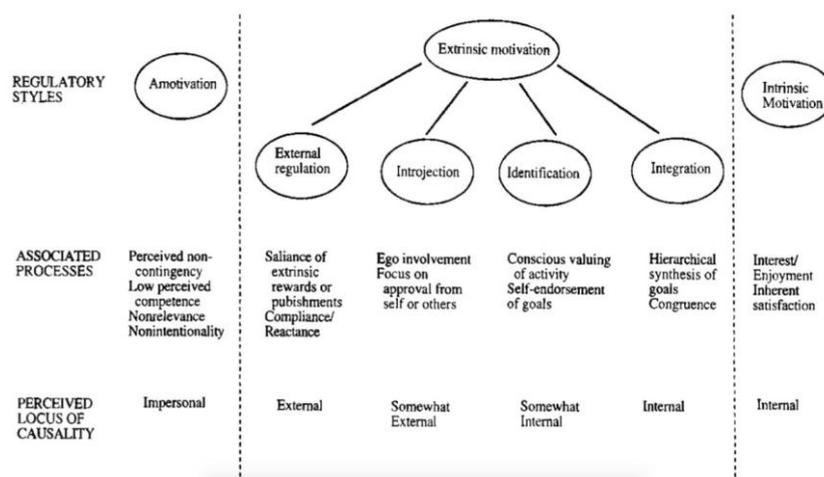

FIG. 1.   A taxonomy of human motivation.

2.1.3 Principal Academic Motivation Theories

1. Deci and Ryan's Self-Determination Theory (SDT) (1985)

Self-determination theory emphasizes many motivational philosophies that impact the level of participation (Deci & Ryan, 1985). The hypothesis states that motivation can vary in both direction and intensity. The various causes that lead to a person's desire to take action are referred to as the orientations of motivation. Students may be inspired to acquire a new skill if doing so will help them get their parents' approval or if mastering the skill will help them land their ideal job. Based on the orientations of motivation, the theory categorizes motivation into several types.

2. Eccles and Wigfield's Expectancy-Value Theory (2002)

According to expectation-value theory, task value beliefs and success expectancies are the two most direct predictors of accomplishment behaviors (Wigfield & Eccles, 2000). Students' perceptions of their chances of performing well on an impending activity are known as expectations for success (Wigfield, 1992). Students are more inclined to participate in an assignment if they have higher expectations for success. Although they are theoretically different, these beliefs are closely related to ability beliefs. Students' assessments of their present proficiency at a particular task are known as ability beliefs. While expectancies for success are focused on potential for the future, ability beliefs are focused on current competence.

3. GARDNER'S SOCIO-EDUCATIONAL MODEL (GARDNER, 2010)

Gardner (1985, 2010) developed the Socio-Educational Model of Second Language Acquisition, which highlights the role of social and educational factors in shaping language learning success. The model takes into account language aptitude, which refers to an individual's cognitive ability to learn a language, as well as the learning context, which includes both formal instruction (classroom settings) and informal exposure (natural language interactions) (Masgoret & Gardner, 2003). The model also highlights the role of motivation, which is composed of integrative motivation, which is the desire to learn a language in order to integrate with its speakers and culture, and instrumental motivation, which is motivated by practical benefits like career or academic advancement (Gardner, 1985).

According to this paradigm, learners with stronger motivation and favorable attitudes about the target language are more likely to put forth effort and persevere in their learning, resulting in greater proficiency (Gardner, 2010). This theoretical paradigm has been extensively used in second language

acquisition research to investigate the link between motivation, attitudes, and language learning results.

2.2 The Cognitive-Code Method in Language Learning

2.2.1 Cognitive-Code Method

Cognitive Code Theory integrates concepts from two primary domains: Chomsky's transformational grammar and Carroll's cognitive psychology. In the 1960s, Carroll challenged the efficacy of conventional teaching methods and advocated for the incorporation of cognitive psychology principles into language acquisition. This paradigm highlights the cognitive processes integral to learning, contrasting with behaviorist perspectives that prioritize passive habit building.(Wiącek,2024)

The Cognitive Code Method, conceived by Robert Lado in the 1960s, combines ideas of cognitive psychology with language acquisition. It emphasizes the comprehension of grammar and vocabulary within significant contexts rather than through mechanical memorization (Lado, 1964). Prior research suggests that this approach can enhance understanding and recall of linguistic structures (Brown, 2007; Ellis, 2008).

2.2.1.1 Cognitive-code learning theory

CCLT is a subset of the Cognitive-Code Approach (Richards & Rodgers, 2014). Cognitive psychologists and applied linguists, like J. B. Carroll (1916–2003) and K. Chastain (1971), argued for it in the 1960s. J. B. Carroll was an American psychologist recognized for his contributions to psychology and educational linguistics. CCLT is grounded in Gestalt psychology, which posits that learning should be holistic. Carroll and Chastain introduced the cognitive-code approach to second language acquisition as an alternative to the prevailing audio-lingual method. They promoted the deliberate examination of linguistic principles as fundamental to acquiring a foreign language.

CCLT is recognized as a synthesis of Chomsky's Transformational Grammar and Carroll's Psychology (Carroll, 1965). It is grounded in Gestalt psychology and formational Generative Grammar (Chastain, 1969:98). "Learning a language involves acquiring conscious control over the phonological, grammatical, and lexical patterns of the second language, primarily through the study and analysis of these patterns as a body of knowledge." (Carroll,1966). An intentional examination of linguistic principles as fundamental to acquiring a second language. This idea emphasizes the significance of the learner's comprehension of the foreign language's structure. Rule deduction is a capability that develops autonomously through the use of language in significant contexts during purposeful practice.

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2.2.1.2 Principles of Cognitive-Code Learning Theory

CCLT emphasizes cognition in a foreign language as the key element of conscious and explicit acquisition of grammatical rules as the codes of that language. The subsequent concepts demonstrate significant similarities between Mentalism and CCLT, both of which prioritize cognition, understanding, rule adherence, and memory retention.

1-Learning occurs via cognitive memory structures that observe, process, store for short- or long-term retrieval, and access information within the brain. Learning transpires via the internal processing of information.

. 2. The fundamental principle of cognitive-code theory is to provide learners with enough opportunities for substantial practice in a second language.

3. Acquiring a second language necessitates explicit instruction and an examination of the language as a complex, rule-governed system (Carroll, 1964). Students must comprehend the linguistic rules prior to the application of drilling in practice.

4. Learning ought to be holistic; it is facilitated when the goal is perceived as an integral component of a structure or system, with an understanding of its interrelations within the broader context (Gestalt Approach).

5. Acquiring a second or foreign language involves the examination of language as a complex system, aiming to achieve conscious mastery of auditory patterns (both segmental and suprasegmental phonemes), lexical inventory (vocabulary), and grammatical structures.

6. Emphasis must be placed on cognition, understanding, and retention.

7-Language acquisition should be advocated as an active cognitive endeavor rather than a mere habit formation or experiential learning activity.

8-Classroom activities are structured to promote learners' discovery of grammar principles through inductive reasoning.

9-Emphasis must be placed on substance rather than form.

10-Lessons should be meticulously organized on a deductive framework, frequently presenting "the rule of the day."

11. Cognitive control operates in the following sequence: phonemes must be acquired prior to words, words before phrases, clauses before sentences, and simple sentences before compound, complex, and compound-complex sentences. This process will aid them in predicting the outcome or drawing inferences about potential subsequent events.

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12. Learners must independently deduce grammar rules.

13. The learner actively engages in information processing; he or she is a cognitive entity.

14.The learner must be central to the learning process.

15. Learning occurs solely when the subject matter is significant to the learner.

The deliberate examination of linguistic rules is fundamental to acquiring a foreign language.

17. Acquiring a language involves gaining conscious mastery over the phonological, grammatical, and lexical structures of the second language, primarily through the study and analysis of these patterns as a comprehensive body of knowledge" (Carroll, 1966:102).

The aforementioned concepts suggest that language acquisition is influenced by the cognitive processes by which the mind perceives, establishes, organizes, and retains information in short-term or long-term memory. The foundational principles of CCLT assist learners in connecting forthcoming knowledge or experiences with prior ones, so facilitating the comprehension of increasingly complex concepts or applications through a robust basis in the target language.(Demirezen,2014)

2.2. How the Cognitive-Code Method Affects   Motivation

Lessens confusion, Students who get clear, grammatically sound explanations feel more in charge of their education. Boosts confidence, Explicitly understanding the rules results in fewer errors and higher self-efficacy.   Promotes deeper learning, Students reduce frustration and increase interest by using a methodical approach to language acquisition (Richards & Rodgers, 2014).

Cognition, in turn, influences motivation. Our thoughts, beliefs, and perceptions can shape our motivation, influencing the objectives we set for ourselves and the work we expend to achieve them. For example, if we believe we are capable of reaching a goal (a cognitive process), we will be more driven to pursue it. Research backs up this claim about cognition's influence on motivation. A research titled "The role of motivated reasoning in optimistic time predictions" investigates how our cognitive processes create motivation and influence behavior (Sage Journals, 1997).

2.3 Previous Studies

Dörnyei & Ushioda (2011)

Highlighting the importance of cognitive processes in language learning, Dörnyei and Ushioda (2011) investigated the Cognitive-Code Method in the larger framework of second language acquisition. Their research demonstrated how rule-based learning and explicit grammar instruction improve students' understanding and memory of linguistic structures. They maintained that deeper cognitive processing

results from meaningful learning as opposed to rote memorization, and that this enhances long-term language acquisition. The study also looked at the motivational elements of structured learning, indicating that students become more motivated and engaged when they comprehend the reasoning behind linguistic norms (Dörnyei & Ushioda, 2011). According to their findings, which are consistent with the tenets of the Cognitive-Code Method, cognitive engagement with language norms promotes accuracy and motivation.

Alrabai (2016)

Alrabai (2016) carried out a quasi-experimental study to look into how teacher-driven motivational techniques affected the motivation and language proficiency of EFL students in Saudi Arabia. Participants were split into an experimental group, which received organized motivational methods, and a control group, which received ordinary teaching, as part of the study's pre-test/post-test control group design. Language proficiency exams were used to examine learning results, and questionnaires were used to gauge motivation levels. The process entailed putting particular incentive strategies into practice for a predetermined amount of time, including teacher encouragement, detailed grammatical instruction, and interactive learning activities. The outcomes demonstrated the efficacy of organized, motivation-focused teaching strategies by showing that students in the experimental group demonstrated noticeably more motivation and enhanced language competency (Alrabai, 2016).

Abdul-Sahib's (2014)

The study entitled "The Effect of the Cognitive Academic Language Learning Approach on EFL Iraqi Intermediate Schools Pupils' Achievement" The study determines the impact of the CALLA approach on the mean achievement scores of intermediate EFL students.

The study samples 50 2nd Intermediate EFL Iraqi female pupils in Iraq , Baghdad at AL-Aadab Intermediate School for girls for the 2013-2014 academic year, dividing them into two groups of 25 pupils each, and randomly assigning them to an experimental and control group.

One instrument has been utilized for data collection. It is the Post Test, Chi-squire , Mann-Whitney and Alpha Cronbach formula statistical methods are used to analyze the data.

The study reveals that students who receive the Teaching CALLA Model show better achievement compared to those without Strategies-Based Instruction. The statistical computation supports the null hypothesis, suggesting that learners should learn through explicit strategy instruction. Teachers

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should be trained to develop students' learning strategies, implementing the CALLA Approach in class. This approach can enhance English language learning

Oyekanmi's (2020)

The study entitled "Effect of Cgnitive-Code Learning Method on Public SENIOR School Students' Achievement in English Primary and Modal Auxiliary Verbs Usages in Owerri, Imo State, Nigeria" The study investigates the impact of cognitive-code learning method on senior school students' English language primary and modal auxiliary verbs achievement in Owerri, Imo State Secondary Schools, Nigeria. The study involved 13,678 students from two schools, with 100 students from each. The results showed a significant improvement in students' achievement from pre-test to post-test, indicating that cognitive-code learning positively influenced their performance. The study also found that female students performed better than males at post-test with cognitive-code learning method. The study recommends the use of cognitive-code learning for teaching English language primary and modal auxiliary verbs.

3 Methodology and Procedures

3.1 Experimental Design

In order to accomplish the goal of the current study, two groups of female students in the fifth preparatory class are selected from AL-Hittin School in Kirkuk City/Sahat Al-Tayaran.

A study design that does not randomly assign participants to conditions but aims to demonstrate a cause-and-effect link between an independent and a dependent variable. Rather, it uses pre-existing groups, which makes it appropriate for social scientific and educational research where complete randomization is not feasible (Creswell & Creswell, 2018, p. 217).

This design preserves the natural classroom environment while enabling researchers to compare the impact of an intervention (Cognitive-Code Method) on academic motivation.

Table   3-1

Groups	Independent Variable	Dependent Variable	Questionnaire
Experimental	Cognitive-Code Method	Academic Motivation	Post Academic Motivation
Control	Prescribed Teaching Method	Academic Motivation	Post Academic Motivation

3.2 Sample Size and Selection

In research, a sample size and selection include:

The procedure for figuring out how many people will participate and how they will be selected to represent a wider population. A well-chosen sample guarantees the study's statistical validity and the generalizability of its conclusions (Fraenkel & Wallen, 2019, p. 92).

To evaluate the impact of the Cognitive-Code Method on academic motivation, 50 fifth preparatory EFL students were included in the sample and split into experimental and control groups.

3.3 Structure of Questionnaires

Students choose between three options for each of the measure's 25 Likert-type items: Agree, Neutral, or Disagree. You can measure academic motivation and assess the impact of the CCM on learning engagement with this method.

1. Understanding and curiosity, or intrinsic motivation: • Students' happiness and satisfaction with learning and problem-solving are evaluated by items 1–5. • These questions assess how well the CCM fosters meaningful comprehension and curiosity.

2. Determined Rule (Learning Value): • Students' perceptions on the importance of learning and its relevance to their future are evaluated by items 6–10. The The CCM helps students understand the value of learning English, which encourages them to do so.

3. External Motivators: Items 11–15 highlight external motivators such avoiding negative repercussions, family expectations, and grades. Although external motivation could be important, the goal of the CCM is to assist students in creating more internalized reasons for learning.

4. The fourth factor, amotivation (lack of purpose), is demonstrated by items 16–20, when students struggle to find meaning or purpose in their studies.

The It would be advantageous for the CCM to reduce these feelings by making learning more engaging and intelligible.

5. Motivation Specific to Tasks (Cognitive Efforts): Progress in this area would be indicative of success because the CCM places a strong emphasis on language structure and mindful grammar learning. Items 21–25 assess students' enjoyment and engagement in cognitively demanding activities, such as critical thinking and problem-solving.

3.4 Content Validity

The degree to which the questionnaire assesses every facet of the construct under study is known as content validity (Brown, 2014). The following actions were made to guarantee that the questionnaire

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measured academic motivation accurately:

1. Expert Review: Three EFL experts assessed the questionnaire's applicability, lucidity, and conformity to academic incentive theories.

2. Consistency with Gardner's Motivation Model (1985): To make sure they addressed both intrinsic and extrinsic motivation, items were modified from the Attitude/Motivation Test Battery (AMTB).

3. Extensive Coverage: The survey asked about a range of motivational factors, including perceptions of teaching strategies, participation in class activities, and interest in learning English.

3.5 Face Validity

The topic of whether a questionnaire seems to measure what it is supposed to assess is known as face validity (Dörnyei, 2007). To prove face validity, a small sample of students (n = 10) participated in a pilot study to see if the questions were intelligible and straightforward. Students gave input on the questions' clarity, readability, and applicability to their educational journey. Expert suggestions and student input led to minor changes that improved clarity and removed ambiguities.

4. DATA ANALYSIS AND DISCUSSION OF RESULTS

4.1 Results Related to the Aim of the Study

Comparison between the Mean Scores of the Experimental Group and that of Control Group in the Motivation Questionnaire

To determine whether there is a significant difference between the mean scores of the experimental group and the control group in the motivation questionnaire, statistics reveal that the mean score of the experimental group is 61.84, while that of the control group is 46.00. Using the t-test formula for two independent samples, the calculated t-value is 12.867, compared to the tabulated t-value of 2.011 at a degree of freedom of 48 and a significance level of 0.05. This indicates that there is a significant difference between the two groups, favoring the experimental group.

Thus, the hypothesis, which states that Students taught using the Cognitive-Code Method show significantly higher academic motivation compared to those taught with traditional methods is approved, as shown in Table (4-1).

Table 4-1

Means, Standard Deviation, and t-Values of the Two Groups

in the Motivation Questionnaire

Groups	No. of students	Mean	SD.	T-Value		DF	Level of Significance
EG.	25	61.84	3.51	Calculated	Tabulated	48	0.05
CG.	25	46.00	5.04	12.867	2.011		

4.2 Discussion of the obtained Results

The study's findings shed light on how the Cognitive-Code Method (CCM) improves students' academic motivation. The discussion will center on the questionnaire's discrimination power, the extreme groups T-test, and the factor analysis findings, and how they relate to past research and theoretical frameworks.

Students' academic motivation was found to be positively impacted by the Cognitive-Code Method (CCM), especially in areas related to intrinsic motivation and engagement in learning. The CCM is founded on the notion that students learn language best when they comprehend its underlying rules and structure.

The experimental group performed better than the control group in terms of overall motivation scores, and the T-test results were statistically significant, indicating that CCM was a more effective way to increase student motivation than conventional techniques. These results are consistent with research like Chastain (1971) and Carroll (1966), which demonstrates how well cognitive techniques work to promote motivation and deeper language learning.

Both groups exhibited high levels of extrinsic motivate (e.g., seeking rewards, avoiding punishment), but the experimental group's intrinsic motivation was noticeably higher. Accordingly, students who were exposed to CCM were more likely to appreciate learning a language for its own reason as opposed to merely for the goal of receiving appreciation from their teachers or grades.

The Self-Determination Theory of Deci and Ryan (1985), which highlights that students who generate an intrinsic motivation are more likely to maintain long-term learning, is supported by this study.

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In the experimental group, items relevant to critical thinking, problem-solving, and grammar rule comprehension had the strongest discriminating power. • This implies that CCM promotes deep cognitive processing, which aids in the development of more significant and long-lasting language abilities in students. • This is consistent with Ausubel's (1968) Meaningful Learning Theory, which states that learning is most effective when new material is connected to existing cognitive structures.

5. CONCLUSIONS

The results show that students' motivation is greatly increased by the Cognitive-Code Method, especially when it comes to intrinsic motivation and engagement. Although the extrinsic motivation levels of the experimental and control groups were comparable, the experimental group had higher levels of enjoyment, comprehension, and cognitive engagement.

In comparison to students using traditional methods, students in the experimental group demonstrated greater learning engagement. This study supports the continued use of cognitive-based approaches in language teaching to promote motivation and successful learning outcomes. CCM fosters deeper cognitive engagement, which results in higher intrinsic motivation.

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