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## The Effect of the Silent Sentences Strategy in Integrative Thinking Among First-Grade Intermediate Female Students in Arabic Grammar

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### Abstract

*The study's goal is to determine how the silent sentences technique affects first-grade intermediate Arabic grammar learners' integrative thinking and to verify the goal of the study, the authors formulated the following null hypothesis: An analysis of the data reveals that there were no notable differences at the 0.05 significance level when comparing the average scores of students in the experimental group, who were instructed in Arabic grammar using the silent sentences strategy, to those of the control group, who received instruction through the traditional method. This conclusion is based on the integrative thinking test results.*

**Keywords:** Silent Sentences, Integrative Thinking, Arabic Grammar.

### Introduction

The authors selected an experimental methodology as the optimal approach to fulfill the requirements of this study. The experimentation was conducted at Amna Bint Wahab Secondary School for Girls, located in the Directorate of Education in Diyala Governorate, specifically within the Baqubah District. The research design employed a random withdrawal method, incorporating a partial control framework to compare the experimental and control groups. The study participants consisted of first-intermediate-grade students, with Division (A) serving as the experimental group comprising 29 students who were instructed in Arabic grammar through the silent sentence's strategy. Meanwhile, Division (B) acted as the control group with an equal number of 29 students who received instruction using the traditional method, culminating in a total sample size of 58 students. The researchers ensured statistical equivalence between the two groups by accounting for the students' chronological ages, measured in months, their final exam scores in Arabic for the academic year 2023-2024, and parental academic achievement levels. To establish a structured framework for the experiment, a panel of experts in Arabic language pedagogy developed 59 behavioral objectives encapsulating the eight topics targeted in the study, supported by a meticulously prepared study plan. These objectives were divided evenly, with eight designated for the experimental group using the silent sentences strategy and eight for the control group employing the conventional methodology. The authors subsequently sought and integrated feedback from experts on two sample objectives, one representing each group, to align with academic standards. Instruction focused on eight themes from the initial segment of the first intermediate grade Arabic grammar curriculum, intended for the first semester of the academic year 2024-2025. To measure the dependent variable, a modern

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psychological laboratory system from Vienna, utilized at the College of Basic Education/University of Diyala, facilitated internationally standardized test administration. The integrative thinking test was employed on both student groups, aiming to discern significant differences between their performance. Statistical analysis of the test results was performed utilizing the T-test for independent samples, leading to findings that favored the experimental group. The authors identified a statistically significant disparity at the 0.05 level, indicating that students trained in Arabic grammar via the silent sentence's strategy outperformed their counterparts in the control group engaging in conventional learning methods. Based on the results, the report recommends several actions:

- .1 Using the silent sentences technique as one of the contemporary methods that help improve students' performance and advance their language, cognitive, and intellectual capacities
- .2 Include in the Arabic language curricula activities that contain raising the thinking of students and motivating them to use it in learning.

The authors suggested several suggestions, including:

- .1 Conducting a study of the impact of the silent sentences strategy on the achievement and logical thinking of fifth scientific students in Arabic grammar.

### **First: Study Problem**

Due to the progress witnessed by our world in the field of knowledge and the production of ideas in the face of life situations and challenges, this progress imposed on us a great necessity in modernizing educational processes in order to keep pace with the development with the cognitive revolutions in the field of information use, the traditional methods used in education are not enough to transfer the ideas of scientists and thinkers to the minds of students, instead of searching for new and innovative means and methods to transfer them in new and more effective ways, capable of providing students with new inputs that stimulate their minds, and their thinking and meeting needs, to keep pace with an ever-changing era.

Therefore, today's students face many difficulties while studying Arabic grammar, so that they are accustomed to studying them in a traditional and routine way, and the prevailing in this is the reliance of teaching staff on methods of memorization, indoctrination and memorization, which in turn contributed to reducing student achievement level in the study, as it is a long-rooted problem, which is not the result of our time.

The difficulty of Arabic grammar is caused by the dryness of the material with its abundance and complexity in a way that does not help to consolidate concepts in the minds of students, but rather makes them fed up with it.

The modern grammar, which is towards the schools of the Arab countries and their colleges, has taken from about the Basra without towards the Kufics and from here came the stagnation and became for many of the contemporaries concerned an end not a means, and this is unfortunate impact of regret ... The choice of the visual doctrine in grammar and morphology in the schools of the Arabs in the present era was one of the reasons for the difficulty of grammatical study and morphological study and the motives for aversion to the Arabic language, so as to tighten this doctrine and its tendency to rely and the abundance of interpretation and analysis, in addition to that the authors in grammar of our contemporaries did not come up with anything new the right of novelty to facilitate this science, which is the balance of the authorship of speech (Jawad, 1954: 11-12)

Hence the urgent need to use modern strategies and means, as the benefit from them is still limited in most of our educational institutions.

If we look at the state of education in Iraq, we see that the space for the culture of thinking is still narrow in our educational curricula, and because the matter of thinking takes a formal form only, thinking skills, especially integrative thinking in most traditional schools, neglected the need and attention to it, and this in turn led to the deterioration of education. This is confirmed by previous studies in the lack of integrative thinking among female students, which generates a state of decline in their academic achievement, including the search of (Al-Majma'i, 2020), the study of Al-Masarawi, (2023), and the search of (Al-Shammari 2024), which recommended the need to raise the capabilities of the level of students in general and learn Arabic grammar in particular.

The problem of this search is to answers the following questions: What is the impacts of the silent sentences strategies on integrative thinking through first-grade intermediate student in Arabic grammar?

## **Second: The Impotent of Search Significance**

The expression of strategy in educational field is a relatively recent term, as it has been used by many in science and other disciplines before it was used in the educational field, It is an expression of a new logic or style with new tools of thinking artificially created by new sciences, and on this basis the strategy is a set of guiding things that determine the teacher's course of action and his course in the lesson (Al-Dulaimi et al.,2003: 45). Its importance is highlighted by mastering the scientific material or the cognitive structure of the curriculum content and increasing communication in the classroom between the teachers and the students, and between the students each other, which contributes to building a properly educated society, and works to develop emotional aspects such as love and curiosity, and the skill aspects of both students and teachers (Shaheen, 2011: 28). The impotent of the silent sentences strategies is that it is 1 of the strategy that work on the installation of useful sentences from a set of scraps that include words to be exchanged between students in the same group silently, in order to strengthen their observation and mental activity, suitable for the owners of social and spatial intelligence for visual learning, and can be implemented as an enrichment activity during the lesson (Ambo Saidi, 9 201: 302). There is a collective agreement that effective thinking is an important factor for success in school and life alike, which made creative patterns and programs multiply in the world in a striking way. Until it became one of the main aim of the various curricula, feeling the importance of this matter in improving the level of student learning (Ryan, 2004: 102), This can only be done by paying attention to the development of mental and cognitive aspects and successful scientific thinking among learners, so thinking in general is a mental activity that strengthens the individual when exposed to a problematic or exciting situation through one or more of his senses, contributing to the development of the ability to solve problems and make decisions, being the finest mental activities, it is a desirable and required goal that the normal individual cannot do without (Al-Moussawi, 2019: 13-19).

Integrative thinking in general and integrative thinking in particular are psychological variables that represent the positive side of psychological construction, and integrative thinking can be considered as a way of thinking that summarizes the main generalities through a broader perspective, and therefore it summarizes the suggestions in the same way, rather than leaving many numbers of suggestions separate and unconnected (Katagiri, 2004: 20). The importance of integrative thinking lies in making the individual innovative, distinct and creative, by

presenting the subjects in the form of educational collaborative projects, developing a deep understanding of scientific issues, enhancing the ability to reasoning and problem-solving skills, as well as increasing their ability to retain learning and teaching, and strengthening the process of inquiry, logical thinking, verification, and team-based cooperation skills (Roman, 2012:3-4)

The human being does not achieve his humanity except by using verbal symbols in the language he speaks, and without them he cannot develop his ideas or express them, language is a human feature and a means of understanding and communication between people, thus, it is always in the service of human goals to preserve heritage and transmit it through generations and link its growth, sophistication and renaissance, language is growing, developed and renewed, and in constant change in its sound systems, rules, vocabulary and meanings (Science, 1982: 6) and that linguistics is a type of study that cannot exactly be considered a natural science, or a branch of the human sciences. It occupies a tangible place among these three sections of human knowledge, that language is a tool of great importance in civilization. Humanity. It is an indispensable thing, as it is a property that is raised for all classes of society from the top to the bottom. Not all people write, and relatively few of them are interested in the literature industry, but all people speak (Ahmed Mukhtar Omar, 1998: 43). The Arabic language is life and beauty, and that it contains literature, thought and heritage of a nation, and there is no evidence of this from its long life and its steadfastness in the face of all kinds of invasion, and from here we must begin... It is the advocate of life to go, that we connect the language to life and make the student feel his daily need for it and convey to him what is above that of the virtues of performance and creativity, and send him to innovate is as he says and writes, that if we prepare our language to give, and we promise it as well to take, it is the sign of life to give and take, and on this the world's languages were drawn, and the Arabic language was not isolated from it on the day it was bright and flowering, and in giving and taking is evidence of contributing to building human civilization and The unity of this civilization and the rapprochement between the sons of man intellectually and tastefully.... Temptation and creation (Tahir, 17:1984). The Arabic language is also one of the important international languages, spoken by millions of its children in the Arab world, and learned like them and more than its children across the world for different purposes: religious, communicative, political, and the educational institutions that teach it have multiplied and competed among themselves in providing distinguished services to learners, and some of these institutions were keen to integrate learners into the Arab environment, so American, European, Asian and other institutions sent learners to Arab countries, to live the linguistic reality and indulge in their children (Abdul Rahim and others, 2019: 5)

The first grade is of great importance in determining the teaching strategy used for application, as the beginning of this stage represents the basis of secondary learning, which begins with the processes of maturity qualified for students when using higher types of thinking and using the senses during the learning process, being a stage that witnesses a great development in the cognitive and emotional aspects when moving from childhood to a more mature and conscious stage (Adas, 2000: 193). The middle school student is also characterized by a lot of cooperation and participation with others during work and study and the love of contact, which generates a growing motivation among students to learn and strong tendencies to cooperate and discuss with others, all of this contributes to the improving students' thinking skills, which increases the chances of good cognitive achievement (Al-Bayati, 2022: 14)

### **Third: - The Objective of the Study**

The purpose of the present research is to determine how the silent sentences approach affects

the integrative thinking of first-grade intermediate Arabic grammar learners.

#### Fourth: Study hypothesis

The authors developed the following null hypothesis in order to fulfill the study's goal:

The average scores of the experimental group students who study Arabic grammar using the silent sentences strategy did not differ statistically significantly from the average scores of the control group students who study the same subject using the standard method in the integrative thinking test at the significance level (0.05).

#### Fifth: Study limits

- .1 Human Limits: Students at government-day secondary schools in the first grade.
- .2 Geographical boundaries: Diyala Governorate, Baqubah District, and Industrial Complex government middle and secondary schools for females connected to the General Directorate of Education.
- .3 Deadline: the first semester of the 2024–2025 school year
- .4 Scientific Limits: The eight themes (science, defined by bal, pronouns, sign nouns, relative nouns, identifier in addition, past tense, and elevating the present tense) comprise the first section of the Arabic grammar book, which is being taught for the 2024–2025 school year.

Define terms .

The terminology of this study is defined as follows:

##### .1 Impact

A- Impact Language: Custom:

\*Al-Khalil bin Ahmed Al-Farahidi: The rest of what you see of everything and what is not seen after what remains a leech. And the effect: the salvation of ghee. And the effect of the sword: I struck him. I went after so-and-so, i.e., I followed him, to derive an act from him (Al-Farahidi, 2003: 56.)

B- The effect idiomatically:

\*According to Shehata and Zainab (2003: 22), the result of a favorable or unfavorable transformation manifests in the learner because of the educational experience.

\*The procedural definition of impact pertains to the modifications introduced by the implementation of silent sentences in fostering achievement and integrative thought processes within the grammar of the Arabic language among the students in the study sample.

##### .2 Strategy:

A- Strategy idiomatically

Hamdi Ismail: A collection of techniques and approaches used in educational settings, including a set of guidelines, rules, techniques, and techniques that challenge the teacher/student's processes (Ismail, 2011: 176).

B. Procedural definition of the strategy: a set of steps, procedures, methods and methods followed by the authors during the authors's teaching to achieve one or more goals in teaching

-3 Silent sentences strategy:

A. Defined terminology:

\*Ambo Saidi as: one of the strategies that are based on the idea of installing useful sentences from a group of scraps and include words, to be exchanged between individuals in the same group silently, and aims to strengthen the processes of observation and mental activity of students, and it is suitable for the owners of social intelligence and space for visual learning, and may be implemented as an enrichment activity in the class, and needs clippings that include words (Ambo Saidi, 2019: 301)

B. procedural definition of the strategy of silent sentences: It is a set of teaching steps adopted by the authors when teaching the authors students of the experimental group in Arabic grammar, which includes the presentation and explanation of the subject, and the distribution of students into groups, then give each student in one group an envelope containing a set of clippings arranged by the student to form a useful sentence by exchanging these clippings with her colleagues, provided that the composition of the sentences silently without suggestion, speech, reference or rejection of any directed clipping, and so the work is done With other groups, forming the so-called silent sentence strategy for the subject in order to achieve the behavioral goals set by the authors in advance, and to achieve integration of the ideas of the studied topic to reach positive results.

Integrative thinking:

A. Thinking language: defined by Ibn Faris:- The thought of the faa and the sufficient and the back of the heart frequency in the thing, it is said to think if his heart is echoed considering, and a man who thinks: many thought (Ibn Faris, 1979: 446)

B- Idiomatically: Integrative Thinking :

Martin: The ability to constructively address opposing ideas, rather than choosing one idea for the solution at the expense of others, a solution is generated in the type of a new ideas that includes element of conflicting idea but is better top to all ideas separately (Martin, 2007: 12)

C. Procedural definition of integrative thinking: It is one of the tired methods of decision-making, especially when facing a complex problem, so that this type of thinking are bases on found modern and innovative solution in steading of start a sheet of possible solution and select the worst of them.

-6The first intermediate: idiomatically: It is one of the two stages that make up the secondary stage, and the duration of the study is three years, in which the holder of the primary certificate or its equivalent is accepted, aimed at achieving scientific, professional, and national and national social competence to prepare students for productive social life to pursue their studies (Ministry of Education, 1990: 403)

-7 Arabic grammar:

A. The rule is a language.

Ibn Manzur defined it: "Al-Qaeda" is the origin and the basic rules and the rules of the house are its basis, and from it the Almighty says (Ibrahim lifts the rules from the house) [Surah Al-Baqarah, verse: 127] (Ibn Manzur, 2005: 144)

B- Arabic grammar idiomatically.

Al-Hashemi defined it: the rules by which the last Arabic words that occurred by combining each other with each other from the syntax and construction and what follows them are known (Al-Hashemi, 2009: 14)

C- Procedural definition: The grammatical rules that will be studied in the study experiment (the number of topics to be studied during the experiment) included in the book to be taught to students of the first intermediate grade for the academic year (2024-2025)

## Chapter Two Section One: Theoretical Aspects

The first axis: constructivist theory

First: The concept of constructivist theory and its emergence

The ancient historical roots of the emergence of constructivist theory extend to the era of Socrates, but crystallized in its current form in the light of the theories and ideas of many constructivist theorists Piaget is the first to lay the first building blocks for constructivism, he believes that the process of knowledge lies in building or reconstructing the subject of knowledge, and then came a group of constructivist theorists who reformatted and modified their ideas, and Ernst von Glasersfeld are one of the most important contemporaries constructivist theorists (Zeitoun and Kamal, 1992: 33). Through access and extrapolation of the literature of educational and psychological heritage, there is no specific labels of constructivism that contain all the meanings or mental processes contained in the concept, but the conclusion of this is that constructivism is a concept that refers to an internal process attributed to cognitive mental activity directed towards an issue to make a decision or satisfy a desire to learn, so it has been mentioned in studies, including the study of Tantawi (2002) and the study of Kamal Zeitoun (2004) several definitions, including: Constructivism is the process of building meaning within the mind of the learner as a result of an effort to understand it or extract meaning from it, and it was also defined as how mental processes are acquired, developed and used, and thus the concept emerges that constructivism is a mental process in which the mind organizes the experiences gained in a new way to acquire certain knowledge (Al-Qaddah, 2017: 5-6)

Second: Constructivist learning thinking.

Constructivists assume that learning is a mental process, which is synonymous with the thinking process, and scientists have also assumed that constructivist learning is built in a way that suits the structure of the human brain, as Cain have postulated.

The principles of constructivist learning and teaching are:

- 1- The nature of the organization of each human brain is its own.
- 2- A challenge develops the thought process while a threat kills it.
- 3- Learning and thinking is a developmental process that evolves with age.
- 4- Learning and thinking are based on the process of awareness mainly.
- 5- The human brain receives and produces total and partial knowledge.
- 6- Attention is an essential process of learning.

7- Emotions are a necessity for the recording and coding process.

8- Generating meaning is a basic readiness of the learner.

9- The brain is a continuous and interactive vital system that continuously builds what directs it and what interacts with it (Qatami 2011, 102)

Silent sentences strategy steps:

-1Students work in groups, and the school gives each group a number of envelopes for each student an envelope that includes scraps, and the school selects the words so that the student cannot formulate a useful sentence, so each student needs clippings from her colleague from the group.

-2Each group must adhere to the following rules:

- Deafening silence, and sign language cannot be used.
- The student does not have the right to reject the clip submitted to her.
- The student remains sitting on her chair and does not move, so that the work is more silent.
- Students start presenting their clippings to others according to a specific period of time.
- The exercise ends when each student has a set of useful sentences in front of them at the table.
- The school discusses the students and each student reads the sentence she has formed.
- Rule.

•Calendar (Ambo Saidi, 2019: 301)

\*The authors did not find any other source or reference that talks about the strategy of sentences other than the previous reference.

Areas of Martin's theory of integrative thinking:

.1Addressing conflicting ideas: Diving deep into conflicting paradigms, through the point of view of stakeholders, takes us out of the debate and intervenes in a way to understand the perspectives to create a solution.

-2Generating solutions: The most common type of thinking is declarative thinking, which in turn announces the validity and error of the proposal, and the tools of declarative reasoning are deductive logic and inductive logic, integrative thinkers go beyond declarative thinking in order to adopt the logic of kidnapping, to find new creative solutions, and thus it is called the combination of deductive and inductive logic.

-3The superiority of ideas (superior ideas): represented by those who assume (to make others agree with me) in order to be able to move forward, they are uninformed and defend their views, to ensure their sovereignty without change (Aziz, 2022: 23.)

The second topic: previous studies:

-Majma'i Study (2017)

This study sought to assess the effectiveness of the educational pillars strategy in enhancing problem-solving and integrative thinking abilities among fourth-grade literary students studying geography and its methodologies. To achieve the study's objective, the authors formulated a null



hypothesis proposing that there would be no statistically significant differences at the 0.05 significance level between the average scores of the experimental group, who were taught geography through the educational pillars strategy, and the average scores of the control group, who received traditional instruction, in terms of dimensions related to problem-solving and integrative thinking. The research sample comprised fourth-grade literary students from preparatory secondary schools in the Khalis region, focusing on the initial chapters of the geography curriculum for the academic year 2016-2017. The authors delineated 80 behavioral objectives for the study and opted for an experimental approach, which was deemed most appropriate given the study's nature. The research design involved partial control of both experimental and control groups through pre-tests and post-tests, with the authors ensuring equivalence between the two groups regarding the integrative thinking scale in the pre-test phase while managing extraneous variables. To facilitate randomization, the authors selected the "Secondary Prophecy for Girls" institution, designating Division A as the experimental group and Division B as the control group, with each group consisting of 26 students. Thus, the study's sample encompassed a total of 52 students across both divisions. Subsequently, the authors developed a test, for which they established validity and reliability. The collected data were subjected to statistical analysis using the T-test for two independent samples, T-test for two related samples, the square Ka. Fakronyach equation, and Pearson's correlation coefficient. The findings indicated a notable advantage for the experimental group students on the problem-solving scale.

#### -Aziz Study 2023:

This study aimed to know (integrative thinking among university teachers) and the significance of statistical differences in integrative thinking according to the gender variable (male-female) among university teachers, and the authors followed the descriptive approach and to achieve the goal of the study, the authors adopted the integrative thinking scale prepared by (Martin, 2007) and (Al-Jubouri translation 2021), and the integrative thinking scale consist of (53) parts, and the apparent validate of the tool was verify, and the stability of the scale was verified by the method of re-testing and was presented to a group of arbitrators in the field of Educational psychology, measurement and evaluation, as the study sample reached (400) teaching from the University of Diyala, and using statistical means the T test for one sample, the T test for two independent samples, the Alpha-Cronbach coefficient, and the Pearson correlation coefficient, analysis of variance between individuals and error variance, and using the statistical bag (Spss) the results of the study showed that there is integrative thinking among university teachers, and there are There are some statistically significant differences according to gender variables. (male-female) and in favor of males.

#### Al-Shammari Study 2024:

This study aimed to investigate the impact of the overlapping wave strategy on the proficiency in the Arabic language among fifth-grade literary students and those exhibiting integrative thinking skills. To achieve the objectives of the research, the authors proposed two null hypotheses: first, that there is no statistically significant difference at the 0.05 level between students in the experimental group, who engage with Arabic grammar through the overlapping wave strategy, and those in the control group, who receive instruction via traditional methods on the post-academic achievement test. The subsequent analysis of data indicates that, at the predetermined significance level of 0.05, no statistically significant difference exists between the experimental group, instructed in Arabic grammar using the overlapping wave strategy, and

the control group, receiving traditional instruction, as assessed by the integrative thinking metrics.

The authors employed an experimental methodology characterized by a structured design that allowed for partial control over both the experimental and control groups in the study. They deliberately selected two institutions, the Jerusalem Preparatory School for Girls and Al-Mujtahidat Secondary School for Girls, both under the Directorate of Education for Diyala Governorate in the Baqubah District, as the sites for their experiment. In an effort to ensure randomness, they chose their study sample from the fifth-grade literary students. This sample consisted of Division (A) representing the experimental group, which included 30 students who learned the rules of the Arabic language through the overlapping waves strategy. On the other hand, Division (B) served as the control group, comprising 33 students who received instruction in Arabic grammar through conventional methods. To establish a fair basis for comparison, the authors ensured that the two groups were equivalent in terms of their chronological ages (measured in months), mid-year exam grades in grammar, parental academic achievement, language proficiency scores, and intelligence test results. Following the identification of the scientific content, the authors formulated specific behavioral objectives and created study plans. These plans were reviewed by a panel of experts and specialists for validation. Subsequently, the authors themselves taught seven topics from the second part of the Arabic language book. To measure the effectiveness of their instructional methods, they utilized two key tools: the post-achievement test, which comprised 40 multiple-choice questions. After rigorously verifying the test for both validity and reliability, the evaluation was administered to the study sample. The authors employed various statistical methods, including the T-test for independent samples and the Chi-square test, alongside coefficients for difficulty and discrimination, the effectiveness of incorrect alternatives, and the Pearson-Spearman Brown correlation coefficient. The analysis aimed to demonstrate the superior performance of the experimental group over the control group in the post-achievement assessment.

Balancing previous studies.

After the authors presented the previous studies, they tried to clarify some indicators and indications between those studies in order to know the similarities and differences between them and between the current study as follows:

.1 The objectives of the studies in question exhibit notable variation regarding their focus. For instance, the research conducted by Al-Majma'i in 2017 sought to evaluate the effectiveness of the educational pillars strategy specifically in addressing problems and enhancing integrative thinking among fourth literary students in the domain of geography foundations and techniques. In alignment with this, Aziz's 2023 study also probed the effectiveness of the educational pillar's strategy in the same context for fourth literary students, underlining a continued interest in this pedagogical approach. Conversely, Al-Shammari's 2024 study shifted attention to the strategy of overlapping waves, investigating its impact on the acquisition of Arabic grammar among fifth literary students while also assessing integrative thinking skills. In contrast to these previous studies, the present study aims to assess the influence of the silent sentence's strategy on both the academic achievement and integrative thinking abilities of first-grade intermediate students in the context of Arabic grammar.

.2 Place of study: - Previous studies agreed with the current study in the place of conducting the study, as a study was conducted (Al-Majma'i 2017), (Aziz 2023) and (Al-Shammari 2024) in Iraq.

.3 Study methodology: Previous studies agreed with the current study in adopting the experimental method, except for the study (Aziz 2023), which followed the descriptive approach.

.4 Stage: - Previous studies differed in terms of the stages in which they were conducted, as a study was conducted on (Al-Majma'i 2017) conducted on fourth grade literary students, and a study (Aziz 2023) conducted on university teachers, and (Al-Shammari study 2024), which was conducted on fifth literary students.

.5 Sample: The number of samples varied, in previous studies, the sample size was (52) female students in the study (Al-Majma'i 2017), (400) university teachers in the study (Aziz 2023), and (63) female students in (Al-Shammari study 2024), while the sample of the current study amounted to (58) female students.

.6 Gender: - Previous study differed in expressions of gender (male with female students), as the study of both (Al-Majma'i 2017) and the study of (Al-Shammari 2024) were conducted on female students only, thus consistent with the current study, and the study (Aziz 2023) was conducted on university teachers (males and females.)

.7 The year of conducting the study: - Previous studies varied in expressions s of the year of the search, as a search was conducted (Al-Majma'i in 2017), a study (Aziz 2023), and a study (Al-Shammari in 2024), while the current study will be conducted in 2025.

The third axis: - Aspects of benefiting from previous studies

- 1- Identify the problem of the study, its dimensions and fields.
- 2- Previous studies helped in selecting the study sample.
- 3- Choosing the right and appropriate ideas for the current study.
- 4- Selection of appropriate statistical means.
- 5- Understand the statistical methods used in data analysis and use them in the current study.
- 6- Preparing a clear vision for the study tool and the scientific steps to build it and ensure its suitability for study, which helps authors choose the appropriate ones.
- 7- Previous studies can facilitate access to sources related to the variables of the current study, as they enriched the authors with the most important titles of the sources approved in such studies.

### Chapter Three

#### Study Methodology and Procedures

##### First: Study Methodology

The experimental method is considered one of the closest correct and objective scientific methods when the authors identifies a set of variables and conditions related to a phenomenon, control and control these conditions and variables, to reveal information accurately and objectively (Al-Sane, 2018: 198)

**Second: Experimental Design**

Experimental design represents the basic building block of study, as there is no experimental study without a design that defines its procedures and reveals the nature of the possible relationship between its variables, as it is the structure and general form of the experiment (Al-Nuaimi, 2019: 83)

Therefore, the authors adopted an experimental design with partial control to suit the conditions of the current study, which is the experimental design with a post-achievement test for the experimental and control study groups as shown in the following table:

Study Group	Independent variable	Dependent variable	Measuring Instruments
Experimental	The strategy of silent sentences.	Integrative thinking.	- Integrative thinking test.
Adjuster	The usual way.		

**Third: Study population and sample**

The population of the study sample was represented by first-grade intermediate students in the government day secondary school for girls affiliated to the General Directorate of Education of Diyala Governorate / Baqubah District for the academic year (2024-2025)

**Fourth: Equivalence of the two study groups.**

To conduct equivalence in the two study groups, the authors seek to make the study groups equal to ensure that the differences between the performance of their members are explained to the differences in the experimental treatments whose effect is investigated (Al-Khafaji, 2019: 111).

Therefore, the authors are keen before starting the procedures of their experiment to be the two study groups, including control statistically and experimental equivalent in some variable that affects the result of the experiment.

Therefore, the authors rewarded before starting the experiment between the students of the two study groups in several variables that may affect the integrity of the experiment:

- 1- The Arabic language grades for the preceding academic year (2023/2024) were derived from the transcript, with input from the school administration.
- 2- The chronological age of the students of the study sample calculated in months.
- 3- Parents' academic achievement.
- 4- Academic achievement of mothers.

**Fifth: Study requirements.**

-1Determining the scientific material: The process of determining the scientific material (academic subjects), is one of the important things in study experiments, and from here the authors identified the teaching topics that the authors will teach to the students of the 2 studier sets, and it was represented by the topics of the first part of the Arabic grammar material for the first intermediate grade, and it included eight topics (science, defined by the, pronouns, sign nouns, hyphenated nouns, defined in addition, past tense, raising the present tense)

-2Setting behavioral goals

The authors meticulously crafted the behavioral goals derived from the overarching objectives and the specific content related to the topics addressed in the Arabic language textbook intended for the first intermediate grade, part one. To fulfill the study's aims, they delineated a total of 59 behavioral goals focused on the cognitive domain relevant to the subject of the experimental study. These goals were categorized according to Bloom's six levels of the cognitive domain: knowledge, understanding, application, analysis, synthesis, and evaluation, which are particularly appropriate for the intermediate educational stage, as they can be effectively observed and measured. Furthermore, the authors sought the insights of several experts and specialists in Arabic language education and teaching methodologies to assess the clarity and appropriateness of the behavioral goals concerning the content of the topics. Based on the feedback and suggestions provided by these professionals, necessary modifications were undertaken, leading to the reformulation of certain goals. The authors established a threshold of agreement at 80%, resulting in the finalized count of behavioral goals remaining at 59.

#### Study Tool (Integrative Thinking Test)

The authors adopted the integrative thinking test obtained from the contemporary psychological laboratory Vienna system, and the similar images were selected, which consists of (29) paragraphs, which is codified globally, and each paragraph contains four shapes, in which each student is asked to determine the similar shape of the original shape among the forms that are presented to her, and the degree is calculated by giving (one degree) for the correct answer, and (zero) for the wrong answer, as the students of the study sample were taken to Diyala University / College of Basic Education on Tuesday 31/12/2024 At exactly nine o'clock in the morning, the students underwent an integrative thinking test, The results of the test were systematically extracted and analyzed for each student, quantifying both the number of correctly answered questions and the time taken for responses, recorded in seconds and minutes by the automated system. Subsequently, the authors utilized these results for further evaluation.

#### Eighth: Application of the experiment

The authors followed procedures in applying the experiment as follows:

-1 Implementation of the experiment: The experiment began on Wednesday 2/10/2024 after two authors completed the requirements of the experiment procedures, represented in the equivalence of the two study groups, controlling extraneous variables, and preparing teaching requirements from behavioral goals and teaching plans, then the authors began the actual teaching of first-grade intermediate students at Amna Bint Wahb Secondary School for Girls, and the authors studied the experimental group Arabic grammar according to the silent sentences strategy, while the control group studied the same material according to the usual method, The experiment lasted a full semester, which is the first semester of the academic year (2024-2025), and the experiment ended on (Tuesday) corresponding to (31/12/2024 AD)

#### Ninth: Statistical Methods

First: The authors used the statistical bag (SPSS) and Microsoft Excel program in most of the study procedure and analyze of its result with some statistical means, which are as follows:

- The T-test for two separate samples
- Chi-square

- Alpha cron bach formula
- Pearson's correlation coefficient (Person crrelation coefficient)
- Difficulty coefficient equation (Difficuly coefficient Forum ula)
- Discrimination Fromula coefficient.
- The effectiveness of destructors.
- Point correlation equation coefficient Beiseraal.
- Effect size equation.

## Chapter FOUR

### Presentation and Interpretation of Results

The research focuses on assessing how the application of the silent sentence strategy affects the integrative thinking capabilities of first-year intermediate female students in an experimental setting, specifically concerning Arabic grammar education. To achieve this goal, the researchers developed a set of hypotheses, both null and alternative. The null hypothesis suggests that there are no significant statistical differences, measured at the 0.05 significance level, in the integrative thinking scores for Arabic grammar when comparing pretest and posttest results within the experimental group of first-year middle school students. In contrast, the alternative hypothesis proposes that noteworthy statistical differences at the 0.05 level are present in the rankings of integrative thinking scores in Arabic grammar when the pre-test and post-test results of the experimental group are analyzed.

To achieve this goal, the Wilcoxon test was used to determine the significance of the differences between two related groups. The minimum value for the test was (3.812b), which is smaller than the table value of the test, which is 0.98 at a degree of free of 50 and a sign level of 0.05. This indicate the rejections of the null hypothech and the accept of the alternative hypothech. That is, there are statistic sign difference at the 0.05 level between the ranks of the integrative thinking scores in Arabic grammar among first-year middle school students in the pretest and posttest. The posttest for the experimental groups indicated that the silent sentence strategy increased the students' integrative thinking skills. The table illustrates this.

An analytical approach utilizing the Wilcoxon test aims to assess the impact of the silent sentence strategy on the integrative thinking abilities of first-year intermediate students learning Arabic grammar. This analysis compares pre-test and post-test results specifically for the experimental group.

Sign	Wilcoxon test value	Positive sign value	Negative sign value	standard deviation	SMA	number	Integrative thinking
Sign	-3.812	6.75	12.50	2.19965	9.9615	26	Post-test for the experimental group
				1.47440	7.5769	26	Pre-test for the experimental group

\*Note that the calculated t-value for two related samples reached 4.961, which is statistically significant at a degree of freedom of 50 and a significance level of 0.05, while the effect strength value reached 0.973, representing a medium effect size according to Cohen's criterion.

The figure shows that:

Wilcoxon test to identify the effect of the silent sentence strategy on the integrative thinking of first-year middle school female students in Arabic grammar in the pre- and post-test of the experimental group

Chapter Five:

First: Conclusions:

In the light of the results reached by the authors and presented the following conclusions:

- 1- The strategy of silent sentences is consistent with what modern education calls for and works to stimulate the motivation of students, increase their activity and interaction within the classroom, considering the individual differences between them.
- 2- The implementation of silent sentences as a pedagogical strategy positions students at the center of the educational experience. By allowing learners the autonomy to engage with material in a manner that aligns with their individual preferences, this approach yields beneficial outcomes that enhance cognitive development. Consequently, this fosters persistence among students and elevates their academic performance.
- 3- The silent sentences strategy enhances the student's self-confidence and develops the spirit of cooperation between them in solving the problems they face, all of this leads to creating an atmosphere of interaction and familiarity, and this is reflected in a positive response to the results of the study.
- 4- The school performs in the strategy of silent sentences the function of a guide and guide, as it works to involve students and explain to them before starting to implement the strategy its purpose and roles in it, to break the barrier of stagnation and eliminate boredom, and exchange views among them, or between students and the school to develop their skills and ability to process information and employ it in educational situations compared to the usual way.
- 5- The topics of the Arabic language that were chosen fit with the level of students in the intermediate stage, to enable them to discover educational topics, and the relationships between them in an organized and gradual manner, which increases their abilities to think and understand what they face.

Second: Recommendations.

In light of the results of the study and the conclusions reached by the two authors, I recommend the following:

Adopting the silent sentences strategy as one of the modern strategies that

1. contribute to raising the level of students' achievement and developing their linguistic, mental and intellectual abilities.
2. Holding training courses by the Ministry of Education and educational institutions

affiliated with Arabic language teachers on the use of modern methods and strategies in teaching, including the silent sentences strategy.

3. Include in the Arabic language curricula activities that challenge students' thinking and motivate them to use thinking in general and integrative thinking in particular.
4. Creating an appropriate educational environment of halls, classrooms, and scientific laboratories, and providing modern educational means to help teachers implement modern teaching strategies.
5. Recommending Arabic language teachers and teachers to take care of the formation of positive attitudes towards teaching Arabic language.
6. The methods of teaching Arabic should include situations in which the student is exposed to the use of integrative thinking in solving the problems they face during learning.

Third: Proposals.

In order to complete the procedures of the current study, the authors present a set of proposals:

- 1- Conducting a similar study for this study for other academic stages, with the aim of identifying the impact of the silent sentences strategy in teaching other branches of the Arabic language such as reading, texts, literature, expression and rhetoric.
- 2- Conducting a study of the effect of the silent sentences strategies on the achievement and logical thinking of fifth grade student in Arabic grammar.
- 3- Conducting a descriptive study to compare teaching according to the strategy of silent sentences and between teaching according to other strategies to choose the best in raising the level of achievement of students.

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