

The Effect of Carroll's Model on Developing Inferential Thinking In The Dictation Subject For Middle School Students

Dr. Huda Mohamed Salman

University of Baghdad - Center for Educational and Psychological Research

Abstract

The main objective of this study is to investigate the effect of the Carroll model on the development of inferential thinking in the matter of dictation among students of the second intermediate class. The result shows that a statistically significant difference at the level (0,05) between the average scores of female students of the experimental group who are studying dictation according to the Carroll model and the average score of female students of the control group who are studying the same subject in the manner. Implications and limitations of the study are discussed, and suggestions for future research are offered.

Key words: Carroll's model, inferential thinking, dictation.

Research problem:

Middle schools suffer from a clear weakness in the skill of dictation, and this negatively affects students' mastery of spelling. In spite of the efforts made by specialists with regard to language teaching, students' problems are still continuing and their clear form is manifested by their weakness and their limited capabilities in dictation and their weak application of sound and linguistic systems as well as the apparent weakness in ability to speak and communicate using this language. (Ahmad, 2002, p. 3). It also shows the weakness of the lack of continuity in going to school or the inability of learners to limit their thoughts, fear and hesitation and the confusion that afflicts them when they hear the spelling that is sometimes higher than the level of the learner's thought and awareness, or it contains difficult words or the length of the spelling, which forces the learner to speed up the pronunciation or writing. (Al-Dulaimi, 1999, p. 108) Here, this problem emerged, which is the difficulty of dictation by students, especially when practicing which is their inability to start and continue in and their symptoms and aversion to them due to the difficulty of pronouncing words and sentences correctly and their inability to draw the word without errors, which prompted the researcher to study this problem

research importance:

Language is the individual's means of expressing his feelings, emotions and needs, and it is a human trait that is unique to human beings from other beings and a sublime gift that God Almighty bestowed upon them as it is their important means of communication, understanding and social adjustment. (Al-Issawi, 1994, p. 9)

Language is of great importance in acquiring all kinds of knowledge and arts, and it is also a way to transfer heritage from the past to the present. Civilization succeeded in codifying and preserving it (Naif, 1985, p. 73) that dictation makes the teacher familiar with the difficulties the learner faces in spelling and in understanding Distinguishing sounds and rules, as it helps the learner to be aware of the weaknesses he suffers from after completing the dictation process and comparing his spelling with the original piece that was dictated to him (1972 - P151- Deyes)

While (Moller, 1970) asserts that any mistake made by the individual in his writing has an effect on changing the word and thus the difficulty of reading and understanding it (1970 - P236 - Muller). The importance of dictation is evident in being one of the main branches of the language for written expression. Grammar and morphological rules are a means of

authenticity for writing in terms of expression and derivation, and a way to develop learners' linguistic fortunes and refine their literary tastes, thanks to what they study of methods, good examples and eloquent correct linguistic structures. (Ibrahim, 1968, p. 193) Educators have set the following dictation goals:

1. It helps the student with good expression and broadens his linguistic information circle, because it alerts him to the parts that the sentences consist of and makes it easier for him to learn about the experiences of others (Najlawi, 1963, p. 116)

2. The student trains the correct writing and fixes its image in the mind (Jamal, 1962, p. 176)

3. Dictation requires training and practice so it helps to improve the student's streak, reveal their weaknesses and work to address them (Zureik, 1970, p. 117)

4. Students return accuracy of observation, strength of attention and good listening (Al-Hashemi, 1967, pp. 141-142)

5. Test students' ability to draw words and know their weaknesses to deal with them (Al-Jumblatti, 1975, p. 171)

Based on the foregoing, the researcher sees the necessity of using modern methods and methods in teaching and diversifying them, because they are among the most important factors that lead to the success of the educational process.

As a result of the changes taking place in this age in knowledge and scientific facts, both quantitatively and qualitatively, and the progression of knowledge, the multiplicity of its methods and strategies, the multiplicity of models, and the organization of their learning, which necessitated building more educational models and designs appropriate to the nature and development of that knowledge (Abu Jaber, 2006: 151)

One of these models is the Carol model, and its primary goal is to reach all students to high levels of education, as well as it can address the problem of slow learners and lead to an atmosphere of interaction and participation between students instead of the spirit of competition when using traditional methods because they depend on specific and specific criteria for the required level of achievement that seeks All students have access to it (Salvin & Karweif, 1984: 730-732).

Research objective: The current research aims at the effect of the Carroll model on developing inferential thinking in the dictation subject of second-graders middle school students

Research hypothesis:

There is no statistically significant difference at the level (0.05) between the degrees of female students who study the Carol model and those who study in the usual way in developing inferential thinking

There is no statistically significant difference at the level (0,05) between the avera scores of female students of the experimental group who are studying dictation according to the Carol model and the average score of students of the control group who are studying the same subject in the traditional way in the post-test to collect the material

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search limits

Second-graders in Al-Sayeda Zainab (P) Intermediate School for Girls of the Baghdad Education Directorate, Karkh Third

Dictation topi the second intermediate grade

Defining terms

Carole's

model knew: (Zayer et al., 2013)

“Formulating a theory that indicates that the degree of learning is determined by the amount of time the student devotes to learning an educational task, compared to the time necessary to master that task” (Zayer et al., 2013: 73)

Procedural definition

A set of procedures and methods used by the researcherteacstudentsofthe second intermediate class (the experimental group) in the dictation

Inferential thinking I knew (Rizk, 1987)

One of the thinking processes that involve graduation or drawing conclusions, and includes solving problems using general principles and applying them to issues and facts (Rizk, 1987, p. 35) Proceduraldefinition:

The mental ability to think through discoveries down to the resul

Chapter two: theoretical framework and previous studies

Carroll Mode

In 1963, Carroll presented a model for school learning, and Carole identified in his model this element of time as a fundamental variable in learning, as he assumed that students were able to achieve goal

John Carroll: - He is one of those involved in educational psycho-social sciences, who graduated from Harvard University, and he created a model for school learning that was first published in the Journal of the Teachers College in New York in 1963, after which the researchers invested heavily in subsequent studies. As much as they are allowed to do so if they are willing to invest the time needed to learn the content, but the time difference between students to master a school assignment or educational mission is indicated by the individual differences between students (Katame and others, 1994: 287) (Jensen, 1965: 101-102)(Carroll, 1963: 724) In his educational method, Carroll relied on the process of evaluating the actual time used on the original time set for the subject, as follows: (Huitt, 2006) Degree of learning = time spent on learning / time needed to learn (Carroll, 1963: 729)

Carroll Model Step

Splitting the content of the subject into educational units.1

Analyze these educational units into smaller units.2

3. Defining criteria for mastery of learning goals in each unit of study, by determining the percentage of paragraphs that students are expected to answer correctly, as they are usually 80-85% of the paragraphs set to measure the mastery of each unit and show a specific percentage of students 80% or more to reach Specific proficiency level

4. Preparing equal forms of formative diagnostic tests, and these tests are not used for students' degrees or placing them in ranks for comparison

5. Preparing a set of various educational materials to assist students who do not reach the level of proficiency in their learning for the academic unit, after applying their formative diagnostic test, as well as defining some procedures, such as teaching in small groups.

6. If a particular procedure or method does not succeed to overcome a specific problem among students What has been learned from this part, knowing the level of achievement of each student, and revealing their weaknesses, and this is done in terms of giving them therapeutic classes individually or in small groups, or by selling any procedure that the teacher deems appropriate according to their need for that

7. After completing all the units of study, a total test is applied, in order to measure the level of mastery of student learning. In light of this test results, students' grades are given to the classroom (Abu Zina, 2010: 199 -201)

: Carroll Model Features

A. The learner learns according to his own speed

B. The objectives are formulated in a procedural manner

C. Dividing the content into small educational units and the learner not moving to the next unit until he reaches mastery

W . Building units based on systems style from careful planning, good application and comprehensive evaluation

:previous studies

Study (Aziz, 1997)

The study was conducted in Iraq, to know the effect of using the George Polya model to solve problems in developing inferential thinking for the fourth year students. He conducted a random test to apply the experiment to two divisions of the fourth year, one of which was studied according to the Polya model, by 32 students, and the other was studied in the usual way and by 32 students as well. Parity between the two groups was verified in the number of variables, and the glomerulus test was used. To measure students' inferential thinking, which consisted of 40 items, their validity and reliability were confirmed by the mid-way segmentation, and a pre-test was conducted, and the results showed:

1. There are statistically significant differences in inferential thinking between the two groups in favor of the experimental group

2. There are statistically significant differences between the pre and post tests in the inferential thinking of the experimental group in favor of the post test

3. The absence of statistically significant differences between the pre and post tests in the inferential thinking of the control group (Aziz, 1997)

Study (Hatem, 2014) :

The study was conducted in Iraq, and it aimed to know the effect of Carole and Assyria's strategy on acquiring historical concepts and their retention

among middle school students, in the subject of Arab Islamic history. The sample consisted of (105) students, (36) students in the first experimental group, which is studying the Carroll strategy, (35) students in the second experimental group that is studying the Assyria strategy, and (34) students in the control group taught in the traditional way. At the beginning of the experiment, the researcher rewarded the three research groups in variables: (intelligence, time life calculated by months, previous knowledge, and academic achievement of the parents). For the purpose of statistically processing data, the researcher adopted a mono-variance analysis and a (chevage) method, and the study revealed the following results:-

1. The students of the first experimental group, who studied with Carroll's strategy, outperformed the students of the second experimental group who studied according to Assyria's strategy of acquiring and retaining historical concepts
2. The students of the first two experimental groups, who studied with the Carroll strategy and the second that was studied according to the Assyria strategy, outperformed the control group that studied the traditional way of acquiring and retaining historical concepts (Hatem, 2014: C-SH).

Research methodology and procedures:

)Experimental design: in Table No (1

the tool	Dependent variable	Independent variable	the group
Inferential thinking test	Inferential thinking	The Carol Model	Experim ental
		traditional way	Control

Research community and sample

Number of members of the two research groups, Table No. (2)

Number of students after exclusion	Number of students before Exclusion	Number of students	the group
32	5	37	Experimental

32	7	39	Control
64	12	76	Total

Equivalence of the two research groups: The researcher's keenness to conduct the equivalence process between the two research groups (control and experimental) statistically in the variables that may affect the results of the experiment, and these variables

1. Chronological age calculated in months: The age of the students - the research sample - was calculated in months, and it became clear that the difference was not statistically significant at the level (0.05), and the calculated T value is less than the tabular T value and with a degree of freedom (62), and this indicates that the two study groups - Control and experimental - equal in time life. Table No. (3) clarifies this

Significance level at)05(0(	Degree of freedom	T value		standard deviation	The average Arithmetic	size the sample	the group
		Tabular	Calculated				
Not statistically significant	62	2	0.307	04.6	188	32	Experime
				97.6	50.187	32	Control

Degrees for the previous year for Arabic language for the first intermediate grade:

The researcher rewarded between the two research groups, it became clear that the difference was not statistically significant at the level of significance (0.05), as the calculated T value was less than the tabular T value and Table No. (4) illustrates this

Significance level at)05(0(	Degree of freedom	T value		standard deviation	The average Arithmetic	size the sample	the group
		Tabular	Calculated				
Not significant Statistically	62	2	189.0	672.9	250.62	32	Control
				192.10	718.62	32	Experimental

Academic Achievement of Parents: After calculating the value of Kay (Ca₂), it became clear that the difference was not statistically significant at the level of significance (0.05), as the calculated value of Ca (Ca₂) was less than the value of Ca (Ca₂) tabular, and Table No. (5) shows that

Significance level at $\alpha=0.05$ ()	Values) K_{α}^2(		Degree of freedom	Academic achievement							Sample volume	the group
	Tabular	Calculated		College or above	diploma	Institute	Prep	Medium	Primary	illiteracy		
Not statistically significant	49.9	72.0	4	9	3	2	5	2	7	4	32	Control
				9	1	4	4	3	5	6	32	Experimental
				18	4	6	9	5	12	10	64	Total

-Academic achievement of mothers: After collecting data and after calculating the value of χ^2 (χ^2), it became clear that the difference was not statistically significant at the level of significance (0.05), as the calculated χ^2 (χ^2) value was less than the χ^2 (χ^2) tabular value, and this indicates The two research groups are equivalent in the academic achievement of mothers, and Table No. (6) illustrates this

Significance level at $\alpha=0.05$ ()	Values) K_{α}^2(		Degree of freedom	Academic achievement							Sample volume	the group
	Tabular	Calculated		College or above	diploma	Institute	Prep	Medium	Primary	illiteracy		
Not statistically significant	81.7	72.0	3	7	2	5	5	5	5	3	32	Control
				6	4	6	4	5	4	3	32	Experimental
				13	6	11	9	10	9	6	64	Total

Adjust some exotic variables:

1. Selecting the sample members: by randomly selecting the members of each group from between the two groups, and through statistical treatment between the members of the two groups

2.Maturity: biological, psychological or mental changes may occur on the same individual who is subject to the experiment, positively or negatively affecting the results of the study Melhem, 2000, p. 362).

3.The accompanying circumstances and variables: in which the accidents that are likely to occur during the period of the experiment are intended to have an effect on the dependent variable (Odeh and Malkawi, 1992, p. 126).

4.Experimental extinction: the effect generated by leaving a number of students of the two research groups during the experiment, which leads to the effect on the group's average achievement (Ouda and Malkawi, 1992, p. 126).

5.The effect of experimental procedures: Fixing a number of characteristics related to the research situation, which may appear during the study between the experimental variable and the dependent variable (Melhem, 2002, p. 360)

6.Duration of the experiment: It was equal for the experimental and control groups, as it started on Sunday, 7/10/2019, and ended on Monday, 24/12/2019

Determining behavioral goals:

Their number reached (133) behavioral goals, distributed at the six levels of knowledge field of Bloom's classification of behavioral goals, by (36) goals for knowledge, (27) targets for understanding, (27) targets for implementation, and (18) targets For analysis, (13) targets for syntax and (12) targets for evaluation, distributed on the main topics of vocabulary for educational content

The test tool for inferential thinking:

it included topics for the dictation subject for the second intermediate class, which is fifteen subjects, according to the relative weight (percentage) for each of the educational content and the level of behavioral goals to determine the optional paragraphs

Validity of the test:

The researcher relied on (80%) of the consensus among the arbitrators on the validity of the paragraph as a minimum to accept the paragraph within the test Stability of the test After applying the test to the exploratory sample, the stability of the test was calculated using the (Cronbach alpha)

method, which is the same method in which the stability of the inverted thinking test items was calculated, reaching (0.84), which is a very high stability factor, as the stability factor is considered good if it reaches (0, 67) and above (Al-Nabhan, 2004, 237 Statistical means: T-test for two independent samples, square (Ca²), difficulty factor, paragraph discrimination factor, Cronbach-alpha equation, effectiveness of alternatives

Show results ;

"The first hypothesis: There is no statistically significant difference at the level (0.05) between the average grades of female students who studied according to the Carroll model, and the average grades of female students studying the same subject according to the usual method," and table (7) shows that

Arithmetic mean, standard deviation, and T value for student scores on the inferential thinking test for the experimental and control groups.

Significance level at)05•0(	Degree of freedom	T value		standard deviation	The average Arithmetic	size the sample	the group
		Tabular	Calculated				
Statistically significant	62	2	24•4	200•13	125•73	32	Experime
				396•11	718•60	32	Control

It is clear from the aforementioned table that the calculated T value is greater than the tabular T value at the significance level (0.05), thus rejecting the null hypothesis.

Conclusions;

-The Carroll model makes the student a central focus of the education process.

-The Carroll model focuses on raising students' motivation with an emphasis on individual differences

-The Carol model requires effort and time by female teachers

Recommendations;

Work to train male and female teachers to use the Carol model

-The necessity of adopting the Carol model, which focuses on making the student the center of the educational process

Suggestions;

Carrying out a similar study in other variables-

To conduct a similar study in other subjects or stages of study for both sexes-

--Conducting a study between males and females on the effect of their teaching according to the Carroll model for the stages (preparatory and university).

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