Available online at http://aran.garmian.edu.krd

Aran Journal for Language and Humanities

https://doi.org/10.24271/ARAN.2025.01-01-08

The Impact of Daniel's Cognitive Model on Teaching Short Story and Listening Comprehension in EFL Setting

Ban Shihab Ahmad

English Department, college of education, University Garmian, Kurdistan Region-Iraq

Article Info	
Received	May, 2025
Accepted	June, 2025
Published:	July, 2025

Keywords

Daniel's , Cognitive Model , Teaching

Corresponding Author

Ban.shahab@garmian.edu.krd

Abstract:

The study aims to find out the impact of Daniel's cognitive model on two dependent variables which are short story and listening comprehension. It has been hypothesized that there is no statistically significant difference between the achievement of students who are taught according to Daniel Cognitive Model and those who are taught according to college academic method (conventional method). The selected sample is presented by the second year students at English / college of Languages and Human Sciences at Garmian University. Pre-post experimental design is applied to the sample of the study. The study has concluded that the instructional intervention used in the experimental group is effective in developing writing short story and listening comprehension.

Introduction:

1.1 Aims

This research aims to find out

1- the impact of Daniel's cognitive model on Iraqi college students' achievement in short story ,
2- the impact of Daniel's cognitive model on Iraqi college students' achievement in listening comprehension.

1.2 The Hypotheses

It is hypothesized that :

1- There is no statistically significant difference at the level of significance (0.05) between the mean score of the students of the control group who are taught according to the conventional method and those of the experimental group who are taught according to Daniel's Cognitive Model at the post test of short story.
2- There is no statistically significant difference at the level of significance (0.05) between the mean score of the students of the control group who are taught according to the conventional method and those of the experimental group who are taught according to Daniel's Cognitive Model at the post test in listening comprehension.

1.3 The Limits

The current study is limited to

1- Second year college students/ English Department/ College of Languages and Human Sciences / Garmian University
2- Reading Comprehension text book 'Developing Skills' ,
3- The academic year 2023/2024.

1.4 The Procedures

The procedures followed in the current study include :

1- Random assigning two groups: one as experimental and one as control groups.

2-Applying the pre-test to the two groups for the sake of equalization among other variables such as age, mothers' and fathers' attainment…etc.

3-The experimental group has been exposed to Daniel's Cognitive Model and the control group has been taught by conventional method.

4-The two groups are exposed to a post-test to find out the effect of Daniel's Cognitive Model on students' achievement.

5- Data of the post-test have been collected, presented, and analyzed by using suitable statistical methods.

6- Results have been discussed leading to certain conclusions.

1.5 Definitions of Basic Terms

1. Effect: is a cognitive product or a dynamic activity generated as a result of the human act represented by the subject of research and influenced by it intentionally (Isa, 2012).

2. Model is: the important overlapping, interrelated and interacting procedures that lead to the development of educational materials to achieve specific goals directed to certain learners in the light of theoretical concepts and principles (Al-Hillah, 2003).

1. Literature Review

As a matter of fact , teaching English in foreign countries can result in unique challenges, especially when it comes to developing students' listening comprehension skills. However, one effective strategy that has shown great success in this context is the Daniel's Model (Al-Tamimi and Ghanim, 2021). This is a

teaching approach that focuses on creating a conducive learning environment where students are actively engaged in listening and comprehending English language input. This model emphasizes the importance of providing students with ample opportunities to listen to authentic English audio materials, such as podcasts, news reports, and conversations, to improve their listening skills. One key aspect of the Daniel's Model is the use of interactive listening activities. Instead of simply playing audio recordings for students to passively listen to audio, teachers using this model actively engage students in the listening process through guided discussions, comprehension questions, and interactive exercises. This doesn't not only help students improve their listening skills but also enhances their overall language proficiency. Another important component of the Daniel's Model is the use of visual aids and real-life contexts to support listening comprehension(Al-Tamimi and Ghanim, 2021).

There is a fact that through providing students with visual cues and real-world scenarios that accompany the audio input, teachers can help students better understand and retain the information they hear. This approach not only enhances listening skills but also fosters a deeper connection between language learning and real-life situations. In addition to incorporating interactive listening activities and visual aids, Daniel's Model also encourages teachers to provide regular feedback and support to students as they work on improving their listening skills. By offering constructive feedback, teachers can help students identify their strengths and weaknesses in listening comprehension and provide guidance on how to overcome challenges(Al-Tamimi and Ghanim, 2021).

Daniel's Cognitive Model represents the most complex forms of human behaviors. It comes at the highest levels of mental activity and is considered one of the most important characteristics that distinguish human being from other creatures (Qatami, 2001). If a person wants to think, s/he must have a scientific background to support his/her thinking. Hence, human must pay attention to thinking and benefit from it in different aspects of life, such as economic, health, social, cultural… etc. (Al-Haidari, 2000).

By creating a dynamic learning environment that integrates interactive listening activities, visual aids, and regular feedback, teachers can empower students to become confident and proficient English language learners. This model not only improves students' listening comprehension but also lays the foundation for their overall language development.

2.1 Components of Daniel's Model

Daniel Neal created the Cognitive Instructional Model in 1987. This model is designed based on ideas and is included in the learning course and advanced systems and plans of concepts. The instructional method reflects the teacher's attention to the learning outcomes of his students. Hence, the teacher explains the subject through presenting basic information that benefits students and they cannot access it. Then, he motivates students' interest in learning and mastering facts, rules and necessary procedures for subsequent learning. In addition, he prepares for an activity taught indirectly where he reviews the previous information, reminds students of scientific laws and rules, explains for them how to do the work required and how to operate and install the devices, and to draw scientific conclusions and experiences in the context of other teaching methods (Al-Khalili , 1996). Steps of the Cognitive Instructional Model (Daniel's Model) Daniel's model is a constructive model developed by Daniel Neal in 1987. It includes the following steps:

1. **Instructional**: At this stage, the teacher begins to present a general introduction to the objectives of the lesson and its content. The purpose of this stage is to focus the students' attention on the tasks required and to motivate them towards learning.
2. **Review**: At this stage, previous lessons related to the new lesson are discussed in order to prepare the students for the current lesson.

3. **Overview**: At this stage, a general and preliminary overview of the new information or problem under study, and students' ideas are provoked by cognitive charts to understand the problem or phenomenon to be learned (Al-Khalili et al., 1996).

4. **Investigations/Activities**: Here, students deal with tools and devices, and carry out manual work through experimentation activities to test their ideas. The teacher can carry out the experiment practically (if the teacher fears for the safety of students) by raising questions and providing hints to help students to find solutions.

5. **Representation**: At this stage, students express their answers to the questions raised by the teacher, and express their findings.

6. **Discussion**: It refers to the discussion of the results of the activity reached by the students. The teacher asks some questions such as: What did the student find? What did the student do? Why did it happen? What evidence did the student find to support their opinion?

7. **Invention**: At this stage, cognitive structure is redesigned to ensure meaningful learning for the learner. The teacher gives the correct interpretations of the concept to be learned and identifies and addresses the forms of misperception.

8. **Application**: New knowledge is being experimented within other new situations.

9. **Summary/ Closure**: The teacher here summarizes the results and explanations and gives a conclusion to the lesson (Al-Khalili et al., 1996).

2.2 Advantages of Daniel's Model

Daniel's model is one of the cognitive teaching models that depends on meaningful learning. This model has the following characteristics:

1. It develops thinking skills, basic science processes such as observation, prediction, measurement, etc., and integration such as interpretation and variable adjustment.
2. It helps learners to obtain and construct information through discovery and participation in collaborative activities.
3. It contributes to the development of different intelligences among learners, including mathematical logical intelligence through the stage of representation and the use of tables and calculations, as well as interactive intelligence through interaction with others, and natural intelligence through dealing with tools in the investigation stage.
4. It attracts attention and stimulates motivation through their presentation of the activities.
5. There is flexibility in the use of activities and means that promote education.
6. The consistent steps of explanation, interpretation, and discussion of a model allow students to acquire knowledge constructively (Muslim, 2015).

2. Procedures

3.1 Experimental Design

Experimental design is described as ''a plan for assigning experimental units to treatment levels and statistical analysis associated with the plan'' (Kirk,2009, p.23). The purpose is to see the effect of an independent variable on a dependent variable (Bell, 2009).

A quasi-experimental nonrandomized control group, pretest-posttest design is employed in this study. This design is most widely used in educational research since it is not possible to randomly assign subjects to the treatment groups. In ideal school situations, classes cannot be reorganized to accommodate a research project (Ary, Jacobs, Irvine, and Walker, 2018).

3.2 Population and Sampling

3.2.1 Population

The population of the study includes the second year students of English Department at/ College of Languages human Sciences at Garmian University. The total number population is (235) girls and boys.

3.2.2 The Sample

The sample of the study consists of (60) college students chosen from department at English Garmian university. The second year consists of two sections; section A is randomly chosen to be the experimental Scientific group, section B is randomly chosen to be the control group. 44 students are chosen to represent the mentioned groups. Table (3) shows the sample of the study.

Table (2) The Sample of the Study

Population & Sample		Groups	Sections	Number
Population	**235**	Experimental	A	44
Sample	**88**	Control	B	44
percentage	**37.44 %**	Total	/	88

3.2.3 Equalization

Certain variables which may cause a variance in the students' achievements should be taken into account otherwise they may affect the research results.

By applying a t-test for two independent samples, it is found that the computed t-value is 0.087 which is lower than the tabulated t- value which is 2.00 at the degree of freedom 86 and a level of significance of 0.05. Therefore, there is no statistically significant difference among the two groups on the age variable, i.e., the two groups are equivalent on this variable see table (3)

Table (3) A Variable of Age

Group	Mean	SD	T-test Value		d.f.	LS
			C .value	T . value		
Experimental	**250.80**	**3.18**	0.087	2.00		
Control	**251.73**	**2.72**			86	0.05

Students' achievement in the academic year 2022-2023, has been calculated from the department of English. After applying t-test, the results show that there is no statistically significant difference between the two groups at 0.05 level of significance. Where the computed t–value is found to be 1.23 which is lower than the tabulated t–value which is 2.00 as shown in Table (4).

Table (4)Students' Achievement at Previous Academic Year

Group	Mean	SD	t-test value		d.f	LS
			C .value	T . value		
Experimental	**61**	**3.18834**	1.23	2.00	86	0.05
Control	**63**	**2.72831**				

Lado (1972:383) suggests that the pre-test of teaching should be used to equate the two groups, because the amount of pre-test knowledge is an important learning factor. The pre-test has been conducted prior to the experiment in order to equalize the two groups (the experimental and control groups). Table (5) involves the specification of behavioural objectives related the pre-test as presented below:

Table (5) The Table of Specification of Pre-test

Q No.	Type	No. of Items	Type	Total scores
1	Read the passage and answer the questions	5	Objective	10
2	Grammar& function "Do as required"	5	objective	10
3	Choose the correct word	5	objective	10
4	Make full sentences with given adjectives	5	objective	10
5	Decide True or false	5	objective	10
6	Matching items	10	objective	10
7	Matching halves of sentences	5	objective	10
8	Listen and complete the conversation	10	objective	10
9	Composition "Give opinions in using the internet"	5	Subjective	10
10	Composition "Write a letter"	1	Subjective	10
Total Number				100

By applying T-test for two independent samples, it is found out that the computed T value is 1.3 which is lower than the tabulated one which is 2.00 with the degree of freedom 8 6and a level of significance of 0.05 . Therefore, there is no statistically significant difference among the two groups in the pretest variable. This indicates that the two groups are equivalent according to this variable, as shown in table (6).

Table (6) T-Test Value for Equalizing of the Two Groups in the Pre-Test Variable

Group	**Mean**	**SD**	**t-test value**		**d.f**	**LS**
			C .value	T . value		
Experimental	**33.1**	**3.18834**	1.30	2.00	86	0.05
control	**31.6**	**2.72831**				

3.3 Test Construction

In order to measure the degree of success of the experiment, the instrument includes preparing a written test. McNamara (2000,p.6) describes that the achievement tests are limited to specific material covered in a curriculum within a specific time frame, and are offered after a course has covered the objectives in question. An achievement test should provision the teaching to which they relate. A written test in this study is constructed to measure the students' achievement.

The Post-test consists of two questions where they measure the students' levels according to Bloom's Taxonomy levels.

- The first question deals mainly with writing a short story with imagination factors like writing about something strange or fiction, scientific journey…etc.
- The second question is a listening comprehension item , which requires the students to focus and answer the question mentioned later, as mentioned in table (7).

Table (7) Specifications of the Achievement Posttest

Q No.	Type	No. of Items	Category objective	Total scores
1	Write a free short story using your imagination	1	to **create** to **evaluate** students' comprehension level through writing paragraphs	25
2	Listen to a situation and Analyze the events inside it	5	**Analyze** **Produce** **Comprehend** **Summarize** **evaluate**	25
Total of scores				50

3.4 Validity

Heaton (1988:159) states that validity as a basic measurement feature of a test, is defined as "the extent to which the test measures what is supposed to measure and nothing else".

Hence, validity is the degree in which the test or other determining tool is truly measuring what we planned to measure. In order to ensure the face validity of the test, it is exposed to a jury members of specialists in English language teaching who have agreed on validity of the questions of the test.

Hughes (1989) shows that a test is thought to have content validity if its content constitutes a representative sample of the language skills and structures, with which the test is intended to be concerned. The test would have content validity only, if it comprises a good sample of the significant structures objectives of the study.

The content analysis of the questions in test is based on Bloom's Taxonomy of cognitive domains to state the behavioral objectives. The cognitive domains begin with the lower level of the cognitive domains and finish with the higher level of cognition which is creation.

Table (8) Number of Test Items for Each Level of Bloom's Taxonomy

Test items	knowledge	Comprehension	Application	Analyzing	Creation	Evaluation	Total
1	/	/	/		1	1	2
2	1	1	/	1	1	1	5
Total	1	1	/	1	2	2	7

3.5 Reliability

Reliability is one of the characteristics of a good test. Weir (2005) asserts that for a test to be valid it must be first reliable, and if a test is reliable the results can also be dependable.

Best and Khan (2010) define reliability as "the extent to which results are consistent over time and an accurate representation of the total population under study is referred to as reliability". If the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable.

For the purpose of computing the reliability Coefficient of the test of the current study, *the split half method* is used.

After collecting the data, Coefficient Correlation factor between the two halves of the test, i.e. the correct responses on odd and even items, is calculated by using 'Pearson Correlation Coefficient' Formula. The

correlation coefficient is found out to be (0.78). It is a good percentage. Yet, because 'Pearson Correlation Coefficient' Formula measures one side of the test; so, correcting the computed coefficient of reliability has to be made by using the *Spearman-Brown equation*, the reliability coefficient amounted to be (0.81) which is an acceptable one.

3.6 Pilot Study

Richards and Schmidt (2010,p.219) state that pilot testing is a preparation of the test to a small but representative group of examinees in order to determine its suitability or effectiveness.

In the light of these positive sides, conducting a pilot test was strongly preferred for the current study. For this purpose, (22) students were randomly selected from second year students from English Department / College of Languages and Human Sciences at Garmian University, to be tested. On the 1st November, 2022, the pilot test was carried out in a normal situation and classroom condition. In particular, the pilot test has been intended to estimate the time required for answering the test and to know whether the questions are clear for the subjects. The pilot test has revealed that the time required to answer the first question is around (30) minutes while the second question is around (25). In addition in this case the sufficient time will be (55- 60) minutes, the pilot study has helped the researcher in making the final administration of the post-test.

3.7 Item Analysis

Item analysis is the process of analyzing examiners' answers in order to know the level of difficulty and the power of discrimination for each item listed in the test as follows:

Ebel (1972: 85) mentions that, the level of difficulty refers to the percentage of students who get the items correct. The total scores of the twenty two students have been ranked from the highest to the lowest one, and then they are divided into two groups. The total scores of the students who answer the test items correctly at both the upper and the lower groups are divided by the total number of the students of both groups.

The test items should vary in their difficulty level between 30 to 90, the satisfactory level of difficulty ranges from 30% to 90% (Madsen, 1983:183).

Stanely and Hopkins (1972: 23) confirm that the discriminating power of the test refers to the degree to which the item discriminates between the students with high and low achievements. According to Brown and Lee (2015), the test item is good if it has a discrimination power of (0.20) or more.

In calculating the discriminating power of the test items, it ranges between 0.30 and 0.70 which is regarded as an adequate power of discrimination.

The test consists of two questions and each question consists two production questions where each one has been given twenty five scores. The first question is concerned with writing a short story. This question is evaluated according to a rubric of five items based on Brown (2006) criteria (grammar, spelling and punctuation, vocabulary ,new ideas , finally cohesion and coherence).

3.8 The Experimental Work

The materials of the experimental group include : students' textbooks , DJ for audible voice for all participates, Whiteboard , markers, Laptop , PowerPoint application , flash cards , pictures and projector for better presentation that enhance some situations of story writing.

The materials of the control group include: student's book , activity book, Whiteboard, and coloured markers.

The application of the experiment started on the Jan. 15th , 2023. The experiment has lasted for eight weeks. The lectures have been organized for two groups as two hours per week. Finally, at the end of the experiment the post-test has been applied.

The control group has been taught through the academic teaching method, while the experimental group has been taught by Daniel's Teaching Model.

The researcher followed the following procedures in this model:

1- The researcher demonstrates and clarifies the working steps and the students have collected enough background on what they are going to do. The researcher has been started with the descriptive Daniel's Model.
2- The researcher presents the recorded PowerPoint and video lecture over the media of the internet such as YouTube , and drives it on the CDs , then supplies students with these recorded lecture.
3- The researcher introduces the lecture according to Daniel teaching model selected chapters on certain short stories.
4- The researcher highlights and emphasizes on screen cast some important events.
5- The researcher asks students to view video lecture at home through these CDs given previously to them, do what teacher asks them to do, write down in the notes book the questions to be answered later, and if there is any ambiguous point it could be discussed later to clarify misconception.
6- The researcher assigns the next lecture for students to be prepared a night before the class.

Hillocks (1995:125) asserts that the goal of planning will be to invent materials and activities that will engage students in using specific processes and strategies relevant to particular writing tasks.

Teaching is best when the teacher is able to draw his lesson plans according to the needs, interests and capacities of the students involved. Lesson planning varies according to the subjects the teacher intends to teach. Some subjects may necessitate detailed plans while others require a brief outline (Al-Mutawa and Kailani, 1989:140).

The necessary lesson plan has been prepared previously. The lesson plan for the control groups are worked out according to the instructions of the teacher's guide according Daniel teaching model. The experimental groups lesson plan are worked out according to the Daniel teaching model.

The post-test is administered to two groups, experimental and control, and is conducted at the same time, in the same place and on the same day.

4. Data Analysis

4.1 Data Analysis Related to the First Aim

This study aims firstly to 'finding out the impact of Daniel's cognitive model on Iraqi college students' achievement in short story' .

According to the first aim , the first hypothesis which assumed '*There is no statistically significant difference at the significance level (0.05) between the mean score of the students of the control group who are taught according to the academic method and those of the experimental group who are taught according to Daniel Cognitive Model at the post test of Short story*' is presented. Table (9) includes the achievement of the students of the experimental and control groups in the post test in the short story.

Table (9)Mean Score, SD , and T-Value in the Post-test of students' Achievement in the Short Story

Group	Mean	SD	T-test value		d.f	LS
			C. Value	T . value		
Experimental	43.2	5.4	2.9	2.00	86	0.05
Control	29.3	3.6				

After collecting data of short story writing , it has been found out that the mean score of the students of the experimental group (43.2) and the control group (29.3) at 0.05 level of significance and 86 degree

of freedom. The computed T- value is (2.9) which is higher than the tabulated one (2.00). This indicates that there is a statistically significant difference between the students of experimental and control groups achievement in writing short story. Thus, first hypothesis is rejected.

4.2 Data Analysis Related to the Second Aim

The second aim is 'finding out the impact of Daniel's cognitive model on Iraqi college students' achievement in listening comprehension.

According to the second aim , the second hypothesis is assumed which is 'There are no statistically significant difference at the level of significance (0.05) between the mean score of the students of the control group who are taught according to the conventional method and those of the experimental group who are taught according to Daniel's Cognitive Model at the post test in listening comprehension'. Table (10) involves includes the achievement of the students of the experimental and control groups in the post test in the listening comprehension.

Table (10) Mean Score , SD , and T- Value of Students' Achievement in the Listening Comprehension

Group	Mean	SD	t-test value		d.f	LS
			T-value	Tabulated T- value		
Experimental	41.2	3.6	2.71	2.00	86	0.05
control	26.5	3.7				

After collecting data related listening question, it has been found that the mean score of the students of the experimental group (41.2) and the control group (26.5) at 0.05 level of significance and 86 degree of freedom. The computed T. value is (2.71) which is higher than the tabulated one (2.00). This indicates that there is a statistically significant difference between the students of experimental and control groups achievement in comprehending listen situation. Thus, second hypothesis is rejected.

4.3 Discussion of Results

The aim of this study was to examine the effect of a specific educational intervention on students' performance in short story writing by comparing the performance of students in an experimental group (who received the intervention) with students in a control group (who did not receive the intervention). A t-test was used to compare the mean scores of both groups and analyze the differences. Comparison statistical results of both groups are:

- **Experimental Group Mean Score**: 43.2
- **Control Group Mean Score**: 29.3
- **Degrees of Freedom (df)**: 86
- **Computed t-value**: 2.9
- **Critical t-value (tabulated value at α = 0.05)**: 2.00

Since the **computed t-value (2.9)** exceeds the **critical t-value (2.00)**, the difference between the groups is statistically significant at the 0.05 significance level. This indicates that the educational intervention provided to the experimental group led to a measurable improvement in their short story writing performance compared to the control group.

The **first hypothesis** in this study was that there is no significant difference between the achievement of students in the experimental and control groups in short story writing (the null hypothesis). Since the computed t-value is greater than the critical t-value, the null hypothesis is rejected, meaning there is a statistically significant difference in performance between the two groups. Thus, the results support the idea that the educational intervention had a positive effect on students' writing abilities.

The results suggest that the **experimental group**, which received the educational intervention, performed significantly better than the **control group, thus this results is confirms the previous study of (Al-Tamimi and Ghanim, 2021)**. This could be attributed to the specific **teaching methods** or **instructional strategies** used in the intervention. For example, the teaching methods could have included creative writing exercises, brainstorming sessions, or individualized feedback, which likely helped students develop their writing skills and creativity. The effectiveness of these techniques appears to have had a tangible impact on the students' ability to write short stories.

The results indicate a statistically significant difference between the performance of the **experimental group** and the **control group** in listening comprehension. The **mean score** for the experimental group was **41.2**, while the control group scored **26.5**.

The computed **t-value (2.71)** is higher than the **critical t-value (2.00)** at the 0.05 significance level with 86 degrees of freedom. This means the difference between the two groups is statistically significant.

As a result, the **null hypothesis is rejected**, confirming that the educational intervention had a **positive effect** on students' ability to comprehend listening situations.

The results provide strong evidence that **targeted educational interventions** can lead to improvements in students' writing performance. These findings could be used to inform future teaching practices, suggesting that educators consider integrating similar methods into their curriculum. If such an intervention can significantly improve writing outcomes, it could be useful in other educational contexts, such as enhancing writing in other subjects or improving overall academic performance.

If the intervention was effective, it is important to investigate **which specific aspects** of the intervention contributed to the improvement in writing. Was it the structure of the activities? The feedback provided? Or perhaps the increased motivation and engagement among students that stemmed from the intervention?

These findings support the effectiveness of targeted instructional strategies in improving **listening comprehension skills**. Educators may consider applying similar interventions to enhance students' listening abilities in different learning contexts.

5.Conclusions

This study has reached the following conclusions:

1. **Effectiveness of the Intervention** :The findings of the study demonstrated that the experimental group significantly outperformed the control group in both short story writing and listening comprehension. This indicates that the instructional intervention used in the experimental group was effective in developing key short story.
2- **Support for Daniel's Cognitive Model**: The improvement observed in students' writing skills aligns with **Daniel's Cognitive Model**, which emphasizes the role of mental processes such as attention, memory, understanding, and higher-order thinking in learning. The intervention likely engaged these cognitive functions through structured and meaningful tasks, contributing to better performance.
3- **Enhanced Short Story Writing through Cognitive Engagement**: The experimental group's higher mean score in short story writing (43.2 vs. 29.3) suggests that the cognitive-based approach encouraged students to plan, organize, and express ideas more effectively. According to Daniel's model, cognitive engagement in tasks such as brainstorming, sequencing events, and elaborating on characters activates both lower- and higher-level thinking skills essential for narrative construction.
4- **Improved Listening Comprehension through Focused Attention and Processing**: The significant gain in listening comprehension (41.2 vs. 26.5) also supports Daniel's theory, as the intervention

may have improved students' ability to focus attention, process auditory input, and store and retrieve information—all critical elements in cognitive listening processes.

5- **Integrated Language Development**: By applying strategies aligned with cognitive theory, the intervention not only improved specific skills (writing and listening) but also contributed to **integrated language development**. Daniel's model supports the idea that cognitive functions are interrelated; thus, enhancing one skill (e.g., listening) can support the development of another (e.g., writing) through shared processes such as comprehension and memory.

6- **Implications for Instruction**: These findings emphasize the importance of **cognitively-informed instruction** in language learning. Educators should consider incorporating activities that promote active cognitive engagement—such as critical thinking, reflection, and meaning-making—as these align with cognitive models of learning and are proven to enhance language performance.

7- **Cognitive and Emotional Growth**: By combining cognitive strategies, metacognitive awareness, and emotional intelligence development, the model creates a supportive learning environment that fosters both intellectual growth and self-confidence in learners.

8- Performance Differences: The experimental group outperformed the control group in both tasks, with a higher mean score in short story writing (43.2 vs. 29.3) and listening comprehension (41.2 vs. 26.5).Statistical Significance: Both tasks showed statistically significant results, as the computed t-values (2.9 for writing, 2.71 for listening) exceeded the critical t-value of 2.00, confirming the effectiveness of the intervention. Stronger Impact on Writing: The short story writing task showed a slightly larger mean score difference, suggesting a slightly stronger impact of the intervention on writing compared to listening.

References

3. Al-Haidari, S. (2000). Spiritual education. As-Sadiqeen Press.
4. Al-Hillah, M. (2003). Educational design: Theory and practice. Al-Maseerah Press for Publishing and Distribution.
5. Al-Khalili, K., et al. (1996). Teaching science in the general teaching stages. Al-Qalam Press for Publishing and Distribution.
6. Al-Mutawa, N., & Kailani, T. (1989). Methods of teaching English to Arab students. Longman.
7. Al-Tamimi, R. S., & Ghanim, K. S. (2021). The effect of Daniel's model on the development of critical thinking in the subject of Arabic language among students of the College of Management and Economics. Psychology and Education, 58(1), 1887-1900. Retrieved from http://www.psychologyandeducation.net
8. Ary, D., Jacobs, L. C., Irvine, C. K. S., & Walker, D. (2018). Introduction to research in education. Cengage Learning.
9. Bell, S. (2009). Experimental design. In R. Kitchin & N. Thrift (Eds.), International encyclopedia of human geography (pp. 225-230). Elsevier.
10. Best, J. W., & Khan, J. (2010). Research in education (10th ed.). Pearson Education.
11. Brown, H. D. (2006). Language assessment: Principles and classroom practices. Pearson Education.
12. Brown, H. D., & Lee, H. (2015). Teaching by principles: An interactive approach to language pedagogy. Pearson Education.
13. Ebel, R. L. (1972). Essentials of educational measurement. Prentice-Hall.
14. Heaton, J. B. (1988). Writing English language tests (2nd ed.). Longman Group UK Limited.
15. Hillocks, G. (1995). Teaching writing as reflective practice. McGraw-Hill.
16. Hughes, A. (1989). Testing for language teachers. Cambridge University Press.
17. Isa, A. (2012). The effect of the employment of the Kurt program on acquiring rhetorical concepts and developing critical skills among female students of teacher training institutes (Unpublished doctoral thesis). Baghdad University, Iraq.
18. Joppe, M. (2001). The research process. Retrieved February 25, 1998, from http://www.ryerson.ca/~mjoppe/rp.htm
19. Lado, R. (1964). Language teaching: A scientific approach. McGraw-Hill.
20. Madsen, H. (1983). Techniques in testing. Oxford University Press.
21. McNamara, T. (2000). Language testing. Oxford University Press.
22. Muslim, A. (2015). The impact of the use of Daniel's model on the development of mathematical concepts and sports communication. (Unpublished master's thesis). Faculty of Education, Palestine.
23. Qatami, N. (2001). Thinking education for the elementary stage. Al-Fikr Press for Printing.
24. Richards, J. C., & Schmidt, R. (2010). Longman dictionary of language teaching and applied linguistics (4th ed.). Routledge.
25. Stanley, C. J., & Hopkins, K. D. (1972). Educational and psychological measurement and evaluation. Prentice-Hall.
26. Weir, C. (2005). Understanding and developing language tests. Prentice-Hall.