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Examining the Impact of Using the Directed Reading Thinking Exercise on University Students' Inferential Comprehension: A Case Study of First-Year Students of English at Mohamed Lamine Debbaghine Sétif 2 University

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ABSTRACT: *This study explores the effects of the Directed Reading Thinking Activity (DRTA) in improving inferential comprehension among first-year English students at Mohamed Lamine Debbaghine University in Sétif, Algeria. Through semi-structured interviews with the instructor and focus group discussions with students, the study identified common challenges in inferential reading. Consequently, the DRTA strategy was implemented as a targeted solution. A quasi-experimental pre-test/post-test design was applied, involving a non-random sample of 34 students divided into experimental and control groups. This mixed-method approach enabled the researchers to test their hypotheses effectively. The study monitored the participants' progress in inferential reading comprehension using The Great Gatsby to introduce culturally significant material. Statistical analysis revealed a significant improvement (p = 0.000) in the experimental group's inferential comprehension. Additionally, qualitative data offered insightful perspectives on the participants' developmental processes. The study also highlighted the role of the DRTA in fostering cultural assimilation among second-language learners.*

KEYWORDS: Directed Reading Thinking Activity, Inferential Reading Comprehension, critical thinking, strategy-based instruction, EFL learners

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Introduction:

Learning to read and comprehend in a foreign language, particularly English as a Foreign Language (EFL), poses several challenges for learners. These challenges stem from linguistic, cognitive, and sociocultural factors. Decoding implicit meanings from contextual clues and relying on prior knowledge are essential skills for grasping the author's intended message. However, sociocultural differences between the writer and reader can significantly hinder EFL reading comprehension. One potential strategy to overcome these barriers is the Directed Reading Thinking Activity (DRTA), which facilitates learners' inferential comprehension of texts, even across cultures.

The DRTA method consists of three key stages,pre-reading, during-reading, and post-reading,which align with socio-constructivist theory, communicative language teaching approaches, and Vygotsky's zone of proximal development. This guided strategy helps learners activate relevant schemata, even when the content is unfamiliar or conflicts with their background knowledge. By focusing on strategy-based instruction, DRTA fosters critical thinking and pragmatic understanding among EFL learners.

This study investigates the effectiveness of the DRTA method in improving first-year EFL students' inferential comprehension, especially when engaging with culturally biased English texts such as *The Great Gatsby*. Specifically, it compares inferential comprehension levels between experimental and control groups and examines the role of cultural acquisition through DRTA.

1. Theoretical and methodological framework:

1.1. Theoretical background

1.1.1. Nature of Reading Comprehension:

The aim of reading is to understand the text, a concept broadly accepted within the field of language studies (Johnson, 2008). However, reading comprehension is a complex, multidimensional construct that involves more than just grasping the surface meaning of words and sentences. Different theories have proposed various approaches to understanding this construct, especially when distinguishing between the "process" and "product" visions of reading comprehension.

1.1.1.1. Relationship Between Reading Comprehension and Decoding:

Effective reading comprehension requires both decoding and comprehension skills, although they are not necessarily interdependent. Research in first-language (L1) reading, for example, demonstrates that some readers may exhibit strong decoding abilities but struggle with comprehension, and vice versa (Adlof, Catts, & Little, 2006). In second-language (L2) reading, advanced decoding skills are a prerequisite for effective comprehension (Koda, 2013).

1.1.1.2. Process versus Product Visions to Reading Comprehension:

Defining reading comprehension solely in terms of its product,i.e., the final understanding of a text,fails to capture its dynamic nature. Instead, process-oriented approaches emphasize the cognitive activities involved in interpreting and constructing meaning from texts. Alderson (2005) described reading as "the relationship between the reader and the text," where meaning is derived from the reader's ability to make sense of contextual cues.

The process-based perspective considers techniques such as eye-tracking and think-aloud protocols to explore how readers actively engage with texts. This approach moves beyond memorization, highlighting the critical role of attention and working memory in reading comprehension (McNamara & Kendeou, 2011).

1.1.1.3. Foreign/Second Language Reading Comprehension:

Reading comprehension in a second language (L2) presents unique challenges due to cross-linguistic factors. While models of L2 reading comprehension may borrow heavily from first-language research, they must also account for the added linguistic hurdles that learners face. Clarke's (1988) linguistic threshold hypothesis suggests that L2 readers cannot rely solely on their L1 skills. Instead, addressing linguistic deficits in the target language is crucial for overcoming reading comprehension challenges.

1.1.2. Types of Reading Comprehension:

Reading comprehension can be divided into three levels: literal, inferential, and critical (Alderson, 2005). Literal comprehension involves understanding explicit information in the text, whereas inferential comprehension requires readers to deduce implicit meanings. The highest level,critical comprehension,involves evaluating the text through analysis and synthesis. Understanding these distinctions is essential for designing effective reading instruction.

1.1.3. Instruction of Reading Comprehension Strategies:

Effective reading comprehension instruction involves teaching learners how to use strategies to enhance their understanding of texts. According to Vygotsky's (1978) zone of proximal development, learners benefit from instruction that pushes them slightly beyond their current capabilities, with teacher guidance serving as a scaffold for their development. The Directed Reading Thinking Activity (DRTA) is an instructional method designed to foster this process by encouraging critical thinking, prediction, and self-regulation during reading.

1.1.4. Directed Reading Thinking Activity (DRTA):

The Directed Reading Thinking Activity (DRTA) was developed by Russell Stauffer in 1969, aiming to engage students in critical and reflective thinking while reading. This approach encourages students to make predictions based on their prior knowledge, which are then confirmed or refuted during and after reading. The DRTA's cyclical structure,prediction, reading, and verification,aligns with schema theory, emphasizing the role of the reader's existing knowledge in drawing inferences from the text (Rumelhart, 1994; Acosta & Ferri, 2010).

In this study, *The Great Gatsby* was selected as the core text for its cultural richness and potential for fostering inferential comprehension. Students engaged with the novel through the DRTA process, using their background knowledge and newly acquired cultural insights to make inferences. The DRTA's focus on prediction also encourages students to develop coherent thinking and future-oriented inference-making, which are critical components of inferential comprehension.

2. Research questions, aims, and hypotheses:

This study explores the effectiveness of the Directed Reading Thinking Activity (DRTA) strategy in improving EFL learners' inferential reading comprehension. Reading comprehension is a complex cognitive process involving both conscious and subconscious strategies (Johnston, 1983). However, many first-year students struggle with inferential comprehension, meaning they find it difficult to read beyond the literal meaning of texts. Traditional reading instruction primarily focuses on techniques like skimming and scanning rather than explicitly teaching students how to think while reading (Carell, 1985; Brown, 2000).

The problem stems from the current instructional methods and assessment practices, which emphasize surface-level understanding rather than deeper, inferential comprehension. Additionally, EFL learners often

lack exposure to culturally embedded aspects of English texts, further complicating their ability to infer meaning. To address these issues, the study aims to examine how the DRTA strategy can enhance students' inferential comprehension and cultural awareness.

The research will investigate:

1. The impact of DRTA on inferential comprehension among first-year students.
2. Differences between an experimental group (using DRTA) and a control group (without DRTA).
3. The role of DRTA in helping students acquire culturally embedded aspects of the English language.

Research hypothesis:

the study was guided by two specific, testable hypotheses:

- **H0 (Null Hypothesis):** There is no statistically significant difference between the experimental and control groups' post-test scores in inferential comprehension.
- **H1 (Alternative Hypothesis):** The experimental group will achieve significantly higher post-test scores in inferential comprehension than the control group.

The study hypothesizes that integrating DRTA will significantly improve the experimental group's inferential comprehension compared to the control group. However, the null hypothesis suggests no significant difference between the groups.

The research is grounded in schema theory, which highlights the role of background knowledge in text interpretation. Many EFL learners struggle because their cultural and linguistic backgrounds differ from those of English-speaking writers, leading to comprehension barriers. DRTA, which includes pre-reading, during-reading, and post-reading stages, helps learners predict, test, and confirm their understanding with teacher guidance. This strategy aligns with socio-constructivist principles, emphasizing active learning and Vygotsky's Zone of Proximal Development (ZPD).

The study is significant for both theory and practice. Theoretically, it contributes to understanding how metacognitive strategies can enhance reading comprehension. Practically, it provides EFL teachers with effective strategies to improve students' ability to infer meaning from texts, helping them navigate cultural differences and develop a more strategic approach to reading.

3. Methodology and participants profile

3.1. Research Setting and Participants

This study was conducted at the Department of English, Mohamed Lamine Debbaghine University in Sétif, Algeria, to examine the impact of the Directed Reading Thinking Activity (DRTA) on first-year students' inferential reading comprehension.

Participants were involved in different research phases:

- **Exploratory Phase:** Included seven volunteer students (two later joined the experimental group), one reading techniques instructor, one experienced TEFL instructor, and ten literature and TEFL specialists who helped refine the pre-test.

- **Pre-Experimental Phase:** 34 students were divided into two groups,17 volunteers in the experimental group and 17 assigned to the control group. They completed a placement test and pre-test.
- **Experimental Phase:** The experimental group received seven DRTA instruction sessions, though attendance varied.
- **Post-Experimental Phase:** 32 students completed the post-test, and 14 from the experimental group provided feedback on DRTA. Three teachers rated the post-test results. The study targeted first-year English students at MLD University, with a final sample of 34 students (33 female, one male) aged 18-20. Participants had been learning English for 7-8 years. A purposeful sampling method ensured an equal distribution between groups.

3.2. Data Collection and Instruments

This mixed-method study combined qualitative and quantitative approaches. The primary instruments included:

- **Pre-Test/Post-Test:** Based on *The Grapes of Wrath*, the test measured inferential comprehension through multiple-choice and open-ended questions. A structured rating scale evaluated both answers and justifications.
- **Validity and Reliability:** Construct validity was ensured through expert review and pilot testing. Reliability was measured via test-retest and inter-rater evaluations, with three EFL teachers assessing consistency.

3.3. Study Materials

The study used excerpts from *The Great Gatsby* and *The Grapes of Wrath*. Initially, a Penguin graded reader version of *The Great Gatsby* was considered, but the final material combined Fitzgerald's original text with SparkNotes summaries. This approach balanced linguistic difficulty and cultural relevance, aligning with DRTA's goal of enhancing inferential comprehension.

3.4. Ethical Considerations:

All participants were fully informed about the objectives and procedures of the research and provided their verbal consent before participating. The researcher ensured that data were handled ethically and transparently, with no manipulation or alteration of results for personal gain.

3.5. Limitations and Delimitations:

Several limitations affected the study, including time constraints that prevented the pre-test from being piloted earlier. Additionally, logistical challenges, such as inconsistent classroom availability, led to participant fatigue during the intervention sessions. These limitations should be considered when interpreting the results.
The study focused exclusively on first-year English students at MLD University of Sétif, Algeria, during the 2022-2023 academic year. The findings may not be generalizable to other populations or academic contexts.

4. Data Analysis and Interpretation

This section analyses data from the beginning of this research to the end of the experiment. Interpret findings based on literature and/or participant voices. These findings should be discussed with the research

questions and hypotheses to solve the problem. Expect several recommendations and pedagogical implications.

4.1. Data Analysis

This section is compartmentalised into the analysis of data generated from the exploratory instruments and data sprung from the analysis of the experimental tools.

4.1.1. Analysis of the Exploratory Data

This section comprises the analysis of the information gathered from the FGD and the interview.

4.1.1.1. Analysis of the FGD

To the first question, all participants said they read English. Because interpreting new, old, compound, and complex words in the third question was difficult, participants only had trouble reading single words. In the fourth question, readers emphasise using multiple strategies to comprehend words and sentences. In response to the fifth question, participants said the reader's lack of cultural background made it difficult to understand the author's and audience's cultural differences.In response to the seventh question, all participants support explicit instruction for reading between the lines to help students resist subconscious knowledge that contradicts their beliefs. It can also help readers develop critical thinking by revealing what the writer did not say. On the eighth question about directing learners' thinking while reading, all participants denied such techniques and preferred extensive reading, scanning, and skimming.

4.1.1.2. Analysis of the Interview

Answering the first question about why Sétif University does not teach reading, the teacher said most teachers struggle to teach reading because they were not taught how to develop it as students. The teacher showed videos of native speakers reading aloud and had MLD university first-year students repeat to answer the second question about assigning immediate reading. On the third question, the informant said reading comprehension requires thinking before answering, as he did with his students.He also confirmed that no instructional strategy guided students' reading thinking. To answer the last question, the teacher suggested using DRTA to improve inferential comprehension. He advised beginning with direction and encouraging students to create later.

4.1.2. Analysis of the Experimental Data

This section is divided into the analysis of quantitative data and the analysis of qualitative data.

4.1.2.1. Analysis of Quantitative Data

This section analyses the demographics of the control and experimental groups, the test data, and the parametric procedures of the paired and independent t-tests to test the research hypotheses.

4.1.2.1.1. Analysis of Demographic Information

This section compares the age and gender distribution of the experimental and control groups.

The experimental group consisted of 17 students aged 18–20. The majority (12 students) were 19 years old, while 2 were 18 and 3 were 20. Similarly, the control group also comprised 17 students, with 11 aged 19, 2 aged 18, and 4 aged 20.

Regarding gender distribution, all 17 participants in the experimental group were female. In contrast, the control group included 16 females (94.1%) and one male (5.9%).

4.1.2.1.2. Learning Experience of English in Middle Schools

Both the experimental and control groups had identical English learning experiences in middle school, with all 17 participants in each group studying English for four years.

In secondary school, the experimental group had varying learning durations, with 82.4% (14 students) studying English for three years and 17.6% (3 students) for four years. Similarly, in the control group, 88.2% (15 students) studied English for three years, while 11.8% (2 students) had four years of experience.

4.1.2.1.3. Analysis of Data Generated from the Tests

This section analyses data from the placement test, test-retest reliability, and pretest and posttest performance of the control and experimental groups.

The placement test scores for both groups ranged from 20 to 28 marks. In the experimental group, the most frequent score (mode) was 26 marks, with two students scoring 20 and one scoring 28. Similarly, the control group had a score range of 20–28, but with three mode values at 24, 25, and 26 marks.

4.1.2.1.3.1. Comparison of Means of the Experimental and the Control Groups on the Placement Test

Mean of the experimental group (marks)	Mean of the control group (marks)
24.41	24.29

Table 1 Means of the Experimental and the Control Groups on the Placement Test

Table 1 aligns the placement test performance of the experimental and control groups, with mean scores of 24.41 and 24.29, respectively, comprising approximately 24 marks.

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4.1.2.2. Reliability Test

The reliability testing was conducted in two phases with the same four participants. In the first administration, scores ranged from 7 to 14, with each score occurring once. In the second administration, scores ranged from 9 to 13, maintaining the same distribution pattern. This consistency across both tests indicates stable performance among participants.

Cronbach's Alpha	N of Items
,902	2

Table 2 Reliability Statistics of the Cronbach's Alpha

Table 2 displays the Cronbach's alpha, which indicates the test's reliability. The test's consistency over time makes it reliable, as the Cronbach's alpha is p = 0,902, which is greater than 0.70.

4.1.2.3. Analysis of the Pre-Test and Post-Test Scores

N	Valid	17
	Missing	0
Mean		9,6176
Std. Deviation		4,51916

Table 3 Data Description of the Pre-Test Performance of the Experimental Group

According to Table 3.15, all 17 experimental group members took the pre-test. The average test score for all participants is 9,61, and the standard deviation is 4,51, showing how far the group is from the mean.

Valid	15
Missing	2
Mean	9,4667
Std. Deviation	4,45400

Table 4 Data Distribution of the Pre-test Performance of the Control Group

According to this table, 4 participants took the pre-test and 2 were absent. Participants' mean total scores on the test are 9.46, with a standard deviation of 4.45.

Valid	13
Missing	4
Mean	16,3077
Std. Deviation	4,08013

Table 5 Data Distribution of the Post-test Performance of the Experimental Group

According to Table 5, 13 out of 17 students in the experimental group had their post-test scores calculated. The mean score of all participants is 16.30, with a standard deviation of 4.08.

Valid	16
Missing	1
Mean	9,5313
Std. Deviation	4,29523

Table 6 Descriptive Statistics of the Post-Test Performance of the Control Group

Table 6 shows that 16 of 17 control group post-test scores were calculated. The group's mean score is 9.53, with a deviation of 4.29.

4.1.2.4. Hypotheses Testing

Most statistical methods used to compare two means are t-tests, which can be divided into two types (Lazar, Feng, & Hochheiser, 2010). When groups have no shared participants, independent samples t-tests are used. Second, paired samples t-tests compare two means from the same participants under two conditions. The independent t test is used twice to compare the pretest and posttest means for the control and experimental groups. The experimental and control groups' pretest and posttest performance means are compared twice using the paired samples t test.

Paired Samples T-Tests

		Mean	Std. Deviation	Std. Error Mean
Pair 1	**Post-test experimental**	16,3077	4,08013	1,13162
	Pre-test experimental	9,6176	4,51916	1,41256

Table 7 Descriptive Statistics of the Performance of the Experimental Group on the Pre-Test and the Post-Test

Table 7 compares experimental group pre- and post-test performance. Pre-test and post-test means are 9,61 and 16,30, respectively; standard deviations are nearly equal.
H0: Mean of the experimental group on the pretest = Mean of the experimental group on the posttest
H1: Mean of the experimental group on the pretest # Mean of the experimental group on the posttest

		Paired Differences					t	df	Sig. (2tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference					
					Lower	Upper				
Pair 1	**Post-test experimental Pre-test experimental**	6,6901	7,21732	2,00173	2,75400	11,47677	3,555	12	,004	

Table 8 Paired Samples T-Test of the Performance of the Experimental Group on the Pretest and the Posttest

The null hypothesis that the experimental group's pretest and posttest performance is not significantly different is rejected by the mean difference of 6.69 and the paired standard deviation difference of 7.21; t (12)=3,55; p=0,004 and p>0.05. The treatment difference is 99.996%.

		Mean	Std. Deviation	Std. Error Mean
Pair 1	**Post-test control**	9,5313	4,29523	1,15002
	Pre-test control	9,4667	4,45400	,92864

Table 9 Descriptive Statistics of the Performance of the Control Group on the Pretest and the Posttest

Table 9 compares pre- and post-test performance of the control group. Pre- and post-test scores mean 9,46 and 9,53, respectively, and their standard deviations are almost equal.

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H0: Mean of the control group on the pretest = Mean of the control group on the posttest
H1: Mean of the control group on the pretest # Mean of the control group on the posttest

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Post-test control Pre-test control	,0646	1,30749	,33759	-,15740	1,29073	1,679	14	,115

Table 10 Paired Samples T-Test of the Performance of the Control Group on the Pretest and the Posttest

Table 10 shows a mean difference of 0.06 in the control group's performance between pre- and post-tests, with paired standard deviation differences of 1.30 (t (14) = 1.67; p = 0 for 115 and p<0 for 05). These findings support the null hypothesis that the control group's pre- and post-test performance did not differ significantly.

Independent T-Tests

		N	Mean	Std. Deviation	Std. Error Mean
Pre-Test	Experimental	17	9,6176	4,51916	1,09606
	Control	15	9,4667	4,45400	1,15002

Table 11 Descriptive Statistics of the Pre-tests of the Control and the Experimental Groups

Table 11 compares the pre-test performance of 17 experimental and 15 control group participants. The experimental and control groups' test score sums mean 9,61 and 9,46, respectively, and their standard deviations are almost equal.

H0: Mean of the experimental group on the pretest = Mean of the control group on the pretest
H1: Mean of the experimental group on the pretest # Mean of the control group on the pretest

		Levene's Test for Equality of Variances		t-test for Equality of Means[2]						
		F	Sig.	t	df	Sig. (2tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Pre-test : experimental and control groups	Equal variances assumed	,023	,880	,095	30	,925	,15098	1,59016	-3,09657	3,39853
	Equal variances not assumed			,095	29,609	,925	,15098	1,58867	-3,09532	3,39728

Table 12 Independent T-Test of the Pretests of the Control and the Experimental Groups

Table 12 shows that Levene's Test for Equality of Variances rejects the hypothesis that the experimental and control groups have unequal variances. Welch t test results are replaced by pooled t-test results with equal variances. Both groups have similar score distributions because their square roots of variance, or standard deviations, are equal. TS= t (30)= 0,095; p = 0,925 and p> 0,05, confirming the null hypothesis that the experimental and control groups' pre-test performance is not significantly different (0,15). Only 7.5% of performance differences between groups are due to chance at α= 0.05. The 95% confidence interval estimates the true mean score difference between groups as -3,09 to 3,39.

group	N	Mean	Std. Deviation	Std. Error Mean
Experimental	13	16,3077	4,08013	1,13162
Control	16	9,5313	4,29523	1,07381

Table 13 Descriptive Statistics of the Posttest of the Experimental and the Control Groups

Table 13 compares experimental and control groups' post-test performance through descriptive statistics. The control group has N (16) and the experimental group N (13) participants. The post-test means for both groups are 16,30 and 9,53, with almost equal standard deviations.

. **H0:** Mean of the experimental on the posttest = Mean of the control on the posttest
H1: Mean of the experimental on the posttest # Mean of the control on the posttest

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Post-test : experimental and control groups	**Equal variances assumed**	,131	,721	4,320	27	,000	6,77644	1,56862	3,55789	9,99499
	Equal variances not assumed			4,344	26,288	,000	6,77644	1,56001	3,57151	9,98138

Table 14 Independent T-Test of the Posttest of the Experimental and the Control Groups

In Table 14, Levene's Test for Equality of Variances (TS=f=0,13; p=0,721; p>0.05) shows that experimental and control groups' variances are similar. Thus, pooled t-tests assume equal group variances. Equal standard deviations (square roots of variances) support similar score distributions in both groups. In the pooled t-test, experimental and control groups have significantly different mean scores (6,77) on post-test performance, rejecting the null hypothesis of no difference (less than 0.01%). The mean score difference between groups is -3,55 to 9,99 with 95% confidence.

4.1.2.5. Analysis of Qualitative Data

This part includes content analysis of participants' predictions/justifications and postprediction data analysis.

4.1.2.6. Content Analysis of the Predictions/Justifications Documents of the Experimental Group throughout the Intervention

The researcher created a generic code with three themes from respondents' predictions and justifications for each question. The applicability of this code for communicative language teaching outweighed its

accuracy. Appropriateness criteria classified responses as inappropriate, less appropriate, or appropriate. Quantifying these responses' quality quantified the experimental group's predictive inferences. Appropriate justifications revealed participants' true thoughts. Correct answers had justifications and predictions, while incorrect ones did not. Improperly justified predictions caused inappropriate responses. Table and graph show DRTA-predicted and justified participants' inferential growth.

Prediction/Justification		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Prediction	**Inappropriate**	15	12	12	5	1	3	2	1
	Less appropriate	2	0	0	8	10	2	2	1
	Appropriate	0	2	2	0	3	9	10	12
Justification	**Inappropriate**	16	12	12	5	1	3	2	1
	Less appropriate	1	0	0	8	10	5	2	1
	Appropriate	0	2	2	0	3	6	10	12
The sum		17	14	14	13	14	14	14	14

Table 15 Development of the Justified Predictive Inferences of the Participants

Question 1-8 participant predictions/justifications are in Table 15. Question 1 had 15 incorrect and 2 less accurate predictions and justifications. The remaining 2 had inappropriate justifications, resulting in 16 inappropriate answers and 1 less appropriate. Two correct and justified predictions and 12 incorrect and justified predictions were in Question2. Question 3: 12 students predicted and justified wrongly, 2 right. 5 students predicted Question4 incorrectly and 8 less accurately. Question 5 had 10 students predict and justify less, 3 correctly and 1 incorrectly. In question 6, 9 participants predicted correctly but only 6 justified correctly, 3 justified less appropriately, 2 predicted and justified less appropriately, and 2 predicted and justified inappropriately. Two answers are inappropriate, five are less so, and six are appropriate. Questions 7: 10 predicted and justified correctly, 2 less and 2 incorrectly. In conclusion, 12 predicted and justified question 8 correctly, 1 less so, and 1 incorrectly.

4.1.2.7. Analysis of Post-Reflections of the Experimental Group

After the experiment, the researcher analyzed participant reflections using document analysis. The study analyzes four recurring patterns.

"Inferential comprehension" codes interpret latent meanings, intentions, and fundamental concepts. This requires inference and reading between the lines to determine author intent.

The theme, "Development in critical thinking," emphasizes deep, analytical, and constructive cognitive engagement to answer complex questions and read intelligently.

"Development in text analysis," improves text comprehension and cultural awareness. American materialism and social class segregation are examined in 1920s America. In "Inferencing while reading any book," implicit meanings in literature are emphasized for their lasting impact.

Finally, "Inferencing in other fields rather than reading" applies critical thinking to other modules and disciplines to emphasize its lifelong value.

5. Interpretation of the Results

Two interpretations of the experimental data findings are given in this section: Interpretation of quantitative and qualitative results.

5.1. Interpretation of Quantitative Results

Two parts of the quantitative results are interpreted based on their purpose. The first interpretation ensures control and experimental groups are homogeneous before treatment, while the second assesses DRTA's impact on elaborative inferential comprehension.

Most participants in the experimental and control groups were 19 years old. Both groups had more women. Their English learning backgrounds included identical middle school and nearly identical secondary school experiences, exposed to similar Algerian pedagogical decisions and instruction. With maximum, minimum, and repeated 26, both groups had similar placement test score distributions. Both groups' Penguin Reader proficiency levels statistically matched level 3, indicating literal reading comprehension homogeneity for inferential analysis (Alderson, 2005). Pretest independent t-test scores showed similar elaborative inferential comprehension, ensuring the design's internal validity.This supports Lodico et al. (2006)'s emphasis on homogeneity between experimental and control groups in quasi-experimental designs to improve internal validity.

5.1.1. Interpretation to Disclose the Efficacy of the DRTA

Compared to the control group, first-year University of MLD students improved their elaborative inferential comprehension with the Directed Reading-Thinking Activity (DRTA). With comparable inference levels before the intervention, the control group performed similarly, but the experimental group improved quickly after DRTA. These findings support Hashemi and Nazari (2012) and El-Koumy (2006) findings that DRTA improves L2 referential and inferential reading comprehension. Like Richardson and Morgan (1997), Beck (1989), and Billmeyer and Barton (1998), Guan (2007) believes predictive inferences are necessary for deep text processing and critical thinking. The test group improved. Prediction and justification experiments tested higher-order cognitive abilities, supporting Rusnak (1983)'s findings that thought-provoking inquiries cause critical reactions in DRTA. As Carrell and Eisterhold (1983) note, the researcher's activation of suitable cultural schemata and provision of culturally biassed schemata that participants didn't know may have improved inferential comprehension.

5.2. Interpretation of the Qualitative Results

Interpreting qualitative data depends on the methods used. This refers to the interpretation of data based on participant predictions and post-experimental reflections.

5.2.1. Interpretation of the Predictions/Justifications of the Participants

Based on the quantified qualitative analysis of participants' predictions and justifications, students' advancement can be divided into three periods based on their justified predictive inferences..

Most students mispredicted and justified questions 1–3: 15–17, 12–14, and 12–14. Illogical and misguided predictions and reasons were given. One participant answered question 1: “He doesn't care about people's sayings because they always try to block you at the zero” based on his father's claim that “the people in this world...” Another participant answered question 2: “He is wise” because he remembers his father's adult guidance. The literal meaning may have been misinterpreted to justify forecasts.

Answering question 2, one participant predicted self-confidence by not caring about others' opinions, while another predicted being strong enough to criticize others thanks to their father's encouragement. One participant answered question 3 with “He is wealthy” because “I think when somebody is strong for sure he has money”. Unjustified predictions include two participants who answered question 3 as “hopeful” and

"Confessed that he was in his first years not like he is now". From verbal chat with students, the researcher aggressively led participants on metacognitive awareness to help them manage and influence their predictions and arguments.

Question 4 showed that 8 of 13 predictions and justifications were less than satisfactory. It was appropriate for participants to rationally defend their predictions and justifications. One participant said, "I think life is very bad in the East and the world there is not uniformed" because Nick said "... to be in uniform" so we can recognise that the East is not uniformed"; another said, "East was a good place, calm and peaceful, people care to each other,. "Life was very developed and he found there a lot of intelligent people" because "We all know that development in the world start in the East because there were a lot of intelligent minds" was predicted and justified by some participants. At this point, the researcher found participants' thinking correct but not advanced.

Participants' predictive justifications improved from questions 5 to 8. Questions 6-8 were increasingly correct, while 5 was mostly wrong. Many students started by saying "Nick describes Gatsby as a non-violent person" instead of "Gatsby was not morally violent." Participants improved self-monitoring and needed less researcher guidance as sessions progressed, aligning with Vygotsky's zone of proximal development. Elaborative inferences and participant reflections promoted reader autonomy and critical thinking in DRTA. One said, "This training was very beneficial, now I can think better," while another said, "Once I had trouble reading between the lines...My thinking grew." DRTA improves independent reading comprehension and higher-order thinking, according to the study.

5.2.2. Interpretation of the Post-Experimental Reflections of the Participants

Student reflections revealed four key themes from the experiment:

- Improved Inferential Abilities and Text Analysis: Participants reported enhanced capacity for making inferences, cultivating analytical reasoning skills, and advancing text analysis capabilities.
- Cognitive and Affective Benefits: The technique facilitated shifts in cognitive perspectives, enabling intelligent reading, comprehending profound meanings, and providing an exquisite experience.
- Sociocultural Learning: Students acquired knowledge about 1920s American society, including the American dream, social class, and gender roles.
- Long-lasting Impacts: Many claimed newfound abilities to discern implied meanings in any text and posited the technique's potential to enhance thinking skills across domains, aligning with Guan's (2007) claims about elaborative inferences improving long-term comprehension.

The themes underscore the multidimensional advantages of the experimental approach, encompassing inferential abilities, cognitive/affective gains, sociocultural learning, and enduring effects on reading comprehension and higher-order thinking...

6. Discussion of Findings

Quantitative results addressed the primary research question and sub-questions. Initially, there was no significant difference in elaborative inferential comprehension between the experimental and control groups. However, following the intervention, the experimental group exhibited a statistically significant improvement in detailed inferential comprehension compared to the control group, supporting the alternative hypothesis.

Qualitative data from the experimental group's predictions/justifications and post-reflections corroborated these findings. Their predictions/justifications demonstrated progress in making informed inferences, a component of elaborative comprehension. Post-reflections further substantiated enhanced elaborative inferential abilities.

Regarding DRTA's facilitation of elaborative inferential comprehension, participants transitioned from requiring extensive support to achieving independent growth. Initial challenges included abstract

reasoning, literal interpretation, forming unsupported personal viewpoints, and inability to justify predictions.

Post-reflections revealed participants' acquisition of 1920s America's sociocultural characteristics relevant to DRTA implementation: materialism over moral values, social class divisions, prescribed gender roles, and consequences of interpreting the American Dream materialistically.

7. Recommendations

Integrating the DRTA strategy is crucial for developing learners' inferential comprehension early on (El-Koumy, 2006). Matching learners' proficiency with texts' literal levels before implementation can help focus on interpretive levels (Alderson, 2005). Hence, graded readers within students' linguistic levels are recommended (Fowler, 2005). Practitioners emphasize associating predictions and justifications to improve higher-order thinking, followed by verbal discussions to clarify thinking processes. Additionally, DRTA can help students acquire culturally-biased features from culturally dense English texts, valuable for acculturation. Students' prior familiarity with texts does not impact predictive inferences if questions are well-constructed and pragmatic. A longitudinal pre-test/post-test experimental design with random selection and assignment is recommended for potentially better results.

8. Implications

This research provided useful EFL reading comprehension insights for teaching Algerian tertiary students:

- Incorporating the DRTA strategy can enhance learners' elaborative inferential comprehension at tertiary levels, presenting a promising new area of study.
- DRTA facilitates learners' adaptation to English culture through culturally diverse instructional texts.
- Integrating DRTA is recommended to improve readers' inferential comprehension abilities.
- DRTA builds strong social networks between students and instructors, promoting the interactive connection central to communicative language teaching.
- It emphasizes learners' active construction of learning through the teacher's guiding role.
- To effectively acculturate, teachers should objectively present culturally sensitive topics while preserving learners' identities.
- DRTA aims to develop independent, critical thinkers.
- It creates a motivating, relaxing environment that reduces affective filters through engaging thinking processes.

The findings highlight DRTA's potential for enhancing higher-order comprehension, cultural adaptation, interactive teaching, identity preservation, critical thinking development, and an optimal affective classroom environment.

9. Conclusion

This research examined the success of the Directed Reading Thinking Activity (DRTA) program in addressing the serious inferential reading comprehension difficulties experienced by first-year EFL students in Algeria. The research was based on the theory that an intentional intervention, with a strategy, could develop students' capacity to "read between the lines," which is often limited by a lack of direct instruction and sociocultural barriers presented in foreign language texts. As a mixed-method, quasi-experimental study, the research showed clear and definitive results. The alternative hypothesis was accepted, and the null hypothesis was rejected. From a quantitative aspect, the experimental group showed a significant improvement in their reading comprehension scores on the post-test ($p = 0.000$), while the control group showed no improvement. These results provide strong evidence of a causal relationship between the implementation of the DRTA program and improvements in elaborative inferential comprehension.

Qualitative data analysis illuminated the cognitive processes behind this statistical improvement. By tracking the experimental group's predictions and justifications, the study captured a clear developmental transition: participants moved from making inappropriate, literal, or unjustified predictions to formulating advanced, appropriate, and text-supported inferences. Post-intervention reflections further substantiated this growth, with participants reporting enhanced critical thinking , improved text analysis , and a new-found ability to discern implicit meaning.

Furthermore, the research confirmed DRTA's dual utility as a tool for cultural acquisition. The use of The Great Gatsby as the instructional text was not merely incidental; the DRTA framework actively guided students in acquiring culturally specific schemata related to 1920s American society, such as materialism and social class segregation.

In conclusion, this research provides strong empirical support for the integration of DRTA into the EFL curriculum. The strategy was shown to be highly effective, moving students beyond traditional, surface-level reading techniques and equipping them with the higher-order cognitive skills necessary to become independent, critical thinkers. The study's findings have significant implications for pedagogy, demonstrating that inferential comprehension can and should be explicitly taught.

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